Province of the
EASTERN CAPE
PUBLIC WORKS & INFRASTRUCTURE

QUOTATION

EXPLORATION AND INSTALLATION OF BOREHOLE AND BACKUP TANK FOR WHITTLESEA DEPOT

CHR5-22/23-0015

NAME OF COMPANY:

_____

CSD Nr:

_____

CRS Nr (CIDB):

_____

CLOSING DATE: 05 OCTOBER 2022 **TIME: 11H00**

Department of PUBLIC WORKS AND INFRASTRUCTURE
Ground Floor Office C.G 19
No.1 Creamery Road,
Old CPA Building,
5320

PART T1: TENDERING PROCEDURES

T1.1 **TENDER NOTICE AND INVITATION TO TENDER**

T1.2 **TENDER DATA**

T1.3 **SBD 1, BID NOTICE AND INVITATION**

T1.1 Tender Notice and Invitation to Tender

BID No.: CHR5-22/23-0015

The Eastern Cape Department of Public Works & Infrastructure and Infrastructure invites contractors with a CIDB Grading of **1 CE PE ONLY** in the following Class of works (**CE)** to tender for the **EXPLORATION AND INSTALLATION OF BOREHOLE AND BACKUP TANK FOR WHITTLESEA DEPOT**

The contract will be based on the GCC 2nd Edition of July 2010 where the Eastern Cape Department of Public Works & Infrastructure will enter into a contract with the successful Bidder.

Only tenderers who have suitable experience and suitably qualified personnel in providing similar services to those that are required are eligible to submit tenders.

Quotation documents may be downloaded for free of charge from the Department of Public Works & Infrastructure and Infrastructure website (www.ecdpw.gov.za/tenders) from **20 SEPTEMBER 2022**.

Queries relating to the issue of these documents may be addressed in writing to Ms. Babalwa Mshede - email: Babalwa.Mshede@ecdpw.gov.za. Technical enquiries: may be addressed in writing to Mr. O. Mpepe– Olwethu.mpepe@ecdpw.gov.za

A compulsory Pre-Tender Briefing meeting with bidders and Department of PUBLIC WORKS & INFRASTRUCTURE personnel will take place at the **Whittlesea Depot, Department of PUBLIC WORKS & INFRASTRUCTURE on 27 SEPTEMBER 2022** starting at **12h00**. Failure to attend the compulsory pre-tender briefing meeting will lead to disqualification.

The closing time and date is **11:00am** on **05 OCTOBER 2022.** Telegraphic, telephonic, telex, facsimile, e-mail and late tenders will not be accepted. Bids must be submitted in sealed envelopes clearly marked tenders **"CHR5-22/23-0015: EXPLORATION AND INSTALLATION OF BOREHOLE AND BACKUP TANK FOR WHITTLESEA DEPOT.**

It is the responsibility of the tenderer/s to ensure that bid documents /proposals are submitted on or before closing time and the correct location as the department will not take responsibility of wrong delivery. Tenderers using courier services for delivery of their bid documents must ensure the delivery is at the correct place / location and time as the department will not be held responsible for wrong delivery. Not delivered to Departmental officials. The Department will not accept responsibility if bids received by officials are not timely deposited in the Bid Box.

Tenders may only be submitted on the quotation documentation that is issued. Tenderers must be registered on the National Treasury Central Supplier Data Base prior award.

Requirements for sealing, addressing, delivery, opening and assessment of tenders are stated in the Tender Data.

B. BID EVALUATION CRITERIA

This quotation will be evaluated in Three (3) phases as follows:

Phase One: Prequalification on Local Production and Content: To be evaluated in terms of the stipulated minimum threshold for Local Production and Content (Electrical Cables products at 90% and Plastic Pipes at 100%).

Phase Two: Compliance and responsiveness to the bid scope, rules and conditions thereafter.

Phase Three: Bidders passing all stages above will thereafter be evaluated on PPPFA.

PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT (PPPFA) POINTS WILL BE AWARDED AS FOLLOWS:

Maximum points on price	-	**80 points**
Maximum points for B-BBEE	-	**20 points**
Maximum Points	-	**100 points**

C. BID SPECIFICATIONS, CONDITIONS AND RULES

The minimum specifications, other bid conditions and rules are detailed in the bid document under Tender Data

The Department of Public Works & Infrastructure and Infrastructure SCM

policy applies. Tender validity period is **90 days.**

D. ENQUIRIES WITH REGARD TO THIS ADVERT MAY BE DIRECTED TO:

SUPPLY CHAIN MANAGEMENT RELATED ENQUIRIES	**TECHNICAL ENQUIRIES**
Name: B. Mshede (Ms) **e-mail:** Babalwa.Mshede@ecdpw.gov.za **Tel:** 045 807 6663 /6624	**Name:** O Mpepe(Mr) **e-mail:** Olwethu.mpepe@ecdpw.gov.za **Tel:** 045 807 6707/ 072 585 7807

FOR COMPLAINTS, FRAUD, & TENDER ABUSE: Call: 0800 701 701 (toll free number)

T1.2 Tender data

The conditions of tender are the latest edition of SANS 10845-3, *Standard conditions of tender*.
SANS 10845-3 makes several references to the Tender Data for details that apply specifically to this tender. The Tender Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the provisions of SANS 10845-3 *and* as contained in **Annexure C** of **Standard for Uniformity in Construction Procurement (Board Notice 423 of 2009 Government Gazette No 42622 of August 2019)**, Each item of data given below is cross-referenced to the clause in SANS 10845-3 to which it mainly applies.

Clause number	Tender Data
3.1	The Employer is Public Works and Infrastructure
3.2	The tender documents issued by the employer comprise the following documents: **THE TENDER** **Part T1: Tendering procedures** T1.1 - Tender notice and invitation to tender T1.2 – Tender data T1.3 – SBD 1, Bid notice and invitation **Part T2: Returnable documents** T2.1 - List of returnable documents T2.2 - Returnable schedules **THE CONTRACT** **Part C1: Agreements and Contract data** C1.1 - Form of offer and acceptance C1.2 - Contract data C1.3 - General Conditions of Contract C1.4 - Form of Guarantee C1.5 - Agreement in Terms of Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) **Part C2: Pricing data** C2.1 - Pricing assumptions C2.2 - Pricing schedule C2.3 - Eastern Cape Input Material **Part C3: Scope of work** C3.1 - Scope of work C3.2 - Construction C3.3 - Borehole Specification C3.4 - Health and Safety Specification C3.5 - HIV and Aids Specification **Part C4: Site information** C4 - Site information Appendix A Drawings
3.2	The tender documents issued by the employer comprise the documents listed on the contents page

3.4	The employer's agent is: Name: O Mpepe Department of PUBLIC WORKS & INFRASTRUCTURE Old CPA Building Kings Park Komani Tel: 045 807 6707 E-mail: Olwethu.mpepe@ecdpw.gov.za
3.4	The language for communications is English
3.6	The competitive negotiation procedure shall be applied.
3.6	Method 2: Three stage procurement procedures shall be applied.
4	**Tender's obligations**
4.1	Only those tenderers who satisfy the following eligibility criteria and who provide the required evidence in their tender submissions are eligible to submit tenders and have their tenders evaluated: • The bidder is registered with the Construction Industry Development Board in an appropriate contractor grading designation for the project; • The tenderer or any of its directors/shareholders is not listed on the Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector; • Directors or company is not in the Treasury's database of restricted suppliers; • The tenderer has not: i) abused the Employer's Supply Chain Management System; or ii) failed to perform on any previous contract and has been given a written notice to this effect; • The bidder has duly completed and signed the Form of Offer, SBD 4. Incomplete or unsigned or poorly completed forms will lead to a bidder being declared non- responsive.
4.3	It is the responsibility of the tenderer to check the tender documents on receipt for completeness and notify the employer of any discrepancy or omission.
4.4	**Confidentiality and copyright of documents** Treat as confidential all matters arising in connection with the tender. Use and copy the documents issued by the employer only for the purpose of preparing and submitting a tender offer in response to the invitation.
4.5	Obtain, as necessary for submitting a tender offer, copies of the latest versions of standards, specifications, conditions of contract and other publications, which are incorporated into the tender documents by reference.
4.6	Acknowledge receipt of addenda to the tender documents, which the employer may issue, and, if necessary, apply for an extension to the closing time stated in the tender data, in order to take the addenda into account.
4.8	**Seek clarification** *Request clarification of the tender documents, if necessary, by notifying the employer at least* ***Five (5)*** **working days** ***before the closing time stated in the tender data.***
4.10	Tenderers are required to state the rates and currencies in Rands. Include in the rates, prices, and the tendered total of the prices (if any), all duties, taxes which the law requires to be paid [except value added tax (VAT)], and other levies payable by the successful tenderer, that are applicable 14 days before the closing time stated in the tender data. Show the VAT payable by the employer separately as an addition to the tendered total of the prices. Provide rates and prices that are fixed for the duration of the contract and not subject to adjustment except as provided for in the conditions of contract identified in the contract data. State the rates and prices in monetary value of the contract unless otherwise instructed in the tender data.
4.10(a)	If after the commencement of the Contract, the cost or duration of the services is altered as a result of changes in, the amount of the main contractor or contract amount from which fee account/estimate were based, or amounts or additions to, any statute, regulation or by-laws, or the requirements of any authority having jurisdiction over any matter in respect of the Project, then the Contract Price and time for completion shall be adjusted in order to reflect the impact of those changes, provided that, within 90 days of first having become aware of the change, the Service Provider or Project Manager furnished the Employer with detailed justification to the Price or Period of the Performance (or both).

4.11	Do not make any alterations or additions to the tender documents, except to comply with instructions issued by the employer or to correct errors made by the tenderer and ensure that all signatories to the tender offer initial all such alterations. Do not make erasures using masking fluid.
4.12	Main tender offers are not required to be submitted together with alternative tenders.
4.12	No alternative tender offers will be considered
4.13.1	Parts of each tender offer communicated on paper shall be submitted as an original. Submit a) the parts of the tender offer communicated on paper as an original plus the number of copies stated in the tender data, with a translation of any documentation in a language other than the language of communication established in 3.4, and b) the parts communicated electronically by the employer of its agents on paper format with the tender.
4.13.2	Sign the original and all copies of the tender offer where required in terms of the tender data. State in the case of a joint venture which of the signatories is the lead partner whom the employer shall hold liable for the purpose of the tender offer. NOTE The employer holds all authorized signatories liable on behalf of the tenderer.
4.13.3	A tender security in the amount of **N/A** is required and shall remain valid for a period not exceeding **N/A** days after the closing date for tender offers. The form of the tender security shall not differ substantially from the sample provided in Annex D of SANS 10845-3.
4.13.5 4.15	The employer's details and address for delivery of tender offers and identification details that are to be shown on each tender offer package are: Location of tender box: **DEPARTMENT OF PUBLIC WORKS & INFRASTRUCTURE AND INFRASTRUCTURE, NO 1 CREAMERY ROAD, OLD CPA BUILDING – RECEPTION AREA, KOMANI** Physical address**:** **GROUND FLOOR, NO.1 CREAMERY ROAD, OLD CPABUILDING– RECEPTION AREA, KOMANI, 5320.** Identification details: **"CHR5-22/23-0015. EXPLORATION AND INSTALLATION OF BOREHOLE AND BACKUP TANK FOR WHITTLESEA DEPOT** Closing date: **05 OCTOBER 2022,** Time: **11:00 am**.
4.13.4	The tenderer is required to submit with his tender the following certificates: 1) a copy of the CSD report showing, amongst other things, that tax matters of the service provider are in order the South African Revenue Services. 2) CIDB CRS number
4.13.5	A two-envelope procedure will not be required.
~~4.13.5~~	~~The "ORIGINAL" and "COPY" are to be submitted as separate packages.~~
4.13.6	Telephonic, telegraphic, telex, facsimile or e-mailed tender offers will not be accepted. The tenderer accepts that the employer does not assume any responsibility for the misplacement or premature opening of the tender offer if the outer package is not sealed and marked as stated.
4.15	The closing time for submission of tender offers is as stated in the Tender Notice and Invitation to Tender. Ensure that the employer receives the tender offer at the address specified in the tender data not later than the closing time stated in the tender data. Proof of posting shall not be accepted as proof of delivery. Accept that, if the employer extends the closing time stated in the tender data for any reason, the requirements of the standard conditions of tender in this part of SANS 10845 apply equally to the extended deadline.
4.16.1	The tender offer validity period is **90 days**. Hold the tender offer(s) valid for acceptance by the employer at any time during the validity period stated in the tender data after the closing time stated in the tender data. If requested by the employer, consider extending the validity period stated in the tender data for an agreed additional period, with or without any conditions attached to such extension. Extend the period of the tender security, if any, to cover any agreed extension requested by the employer.

4.16.2	**Placing of contractors under restrictions / withdrawal of tenders** If any tenderer who has submitted a tender offer or a contractor who has concluded a contract has, as relevant: withdrawn such tender or quotation after the advertised closing date and time for the receipt of submissions; after having been notified of the acceptance of his tender, failed or refused to commence the contract; had their contract terminated for reasons within their control without reasonable cause; offered, promised or given a bribe in relation to the obtaining or the execution of such contract; acted in a fraudulent, collusive or anti-competitive or improper manner or in bad faith towards the Provincial Government; or, made any incorrect statement in any affidavit or declaration with regard to a preference claimed and is unable to prove to the satisfaction of the Provincial Government that the statement was made in good faith or reasonable steps were taken to confirm the correctness of the statements, such tenderer/s may be placed under restriction from tendering with the state. Procedures are outlined in the EC SCM Policy for Infrastructure procurement and Delivery Management and also on **cidb** Inform Practice Note #30. Excerpts of the policy can be availed on request of any interested tenderer.
4.19	Access shall be provided for the following inspections, tests and analysis: **N/A**
4.20	The preferred tenderer will be required to submit an approved insurer undertaking to provide the Performance Bond / Guarantee / Surety / Security to the format and/or standard as per DPW&I policy
5	**Employer's undertakings**
5.1	The Employer will respond to requests for clarification received up to **Five (5)** working days before the tender closing time. If, as a result of the issuing of addenda, it is necessary to extend the closing time stated in the tender data, grant such extension and notify all respondents accordingly.
5.2	The employer shall issue addenda until **Five (5)** working days before tender closing time.
5.4	Tenders will be opened immediately after the closing time for tenders at **11:00am hours.**
5.6	Do not disclose to tenderers, or to any person not officially concerned with such processes, information relating to the evaluation and comparison of tender offers, the final evaluation price and recommendations for the award of a contract, until after the award of the contract to the successful tenderer.
5.8	Determine, after opening and before detailed evaluation, whether each tender offer that was properly received a) complies with the requirements of the standard conditions of tender in this part of SANS 10845, b) has been properly and fully completed and signed, and c) is responsive to the other requirements of the tender documents. • A responsive tender is one that conforms to all the terms, conditions, and scope of work of the tender documents, without material deviation or qualification. • A material deviation or qualification is one which, in the employer's opinion, would d) detrimentally affect the scope, quality, or performance of the works, services or supply identified in the scope of work, e) significantly change the employer's or the tenderer's risks and responsibilities under the contract, or f) affect the competitive position of other tenderers presenting responsive tenders, if it were to be rectified. Reject a non-responsive tender offer, and do not allow it to be subsequently made responsive by correction or withdrawal of the non-conforming deviation or reservation.
5.9	**Arithmetical errors, omission and discrepancies** Check responsive tenders for discrepancies between amounts in words and amounts in figures. Where there is a discrepancy between the amounts in figures and the amount in words, the amount in words shall govern. For Vat related discrepancies, National and Provincial Treasury prescripts in relation to VAT procedures apply.

5.11.1 The financial offer will be reduced to a comparative basis using the Tender Assessment Schedule.

Table F.1: Formulae for calculating the value of A

Formula	Comparison aimed at achieving	Option 1[a]	Option 2[a]
1	Highest price or discount	$A = \left(1 + \frac{(P - P_m)}{P_m}\right)$	$A = P/P_m$
2	Lowest price or percentage commission / fee	$A = \left(1 - \frac{(P - P_m)}{P_m}\right)$	$A = P_m/P$
a	P_m is the comparative offer of the most favourable comparative offer. P is the comparative offer of the tender offer under consideration.		

5.11.3 The procedure for the evaluation of responsive bids is **Method 2: Price and Preference: This quotation will be evaluated in three (3) stages as follows:**

STAGE ONE: Prequalification on Local Production and Content: To be evaluated in terms of the stipulated minimum threshold for Local Production and Content (Electrical Cables products at 90% and Plastic Pipes at 100%).
STAGE TWO: Compliance and responsiveness to the bid scope, rules and conditions thereafter.
STAGE THREE: Bidders passing all stages above will thereafter be evaluated on PPPFA.

STAGE ONE: PREQUALIFICATION ON LOCAL PRODUCTION AND CONTENT:

1. Only locally produced goods or services with a stipulated minimum threshold for local production and content in the following **designated sectors: Electrical Cables products at 90% and Plastic Pipes at 100%** will be considered for further evaluation.
2. The tenderer has duly completed and signed the Declaration Certificate for Local Production and Content (**SBD 6.2 form)** together with **Annexure C** (Local Content Declaration: Summary Schedule) and submitted the documents at the closing date and time of the bid.
3. Failure to complete the relevant documents (SBD 6.2 and Annexure C) and indicate the minimum percentages OR not meeting the minimum percentage of the designated sector applicable to this bid for Local Production and Content will automatically invalidate the bid for further evaluation.
4. If the raw material or input to be used for a specific item is not available locally, bidders should obtain written authorization from the Department of Trade and Industry (DTI), should there be a need to import such raw material or input and a copy of this authorization letter must be submitted together with the bid document at the closing date and time.
5. **The SABS approved technical specification number SATS 12886:2011 and the Guidance on the Calculation of the local Content together with the Local Content Declaration Template (Annexure C (Local Content Declaration: Summary Schedule), D (Imported Content Declaration: Supporting Schedule to Annex C) and E (Local Content Declaration: Annex C) are accessible to all potential bidders on the DTI's official website. http://www.thedti.gov.za/industrialdevelopment/ip.jsp at no cost.**
6. For further information, bidders may contact DTI on 012 394 1135

STAGE TWO: COMPLIANCE, RESPONSIVENESS TO THE BID SCOPE, RULES AND CONDITIONS

A. Bidders' proposals must meet the following minimum requirements and supporting documents must be submitted with the completed quotation document in a sealed envelope in the bid box at the closing date and time. Failure to comply will automatically eliminate the bid for further consideration:

1. This quotation document must be submitted in its original format.
2. Bids which are late, incomplete, unsigned or submitted by facsimile or electronically, will not be accepted.
3. Bidder must be registered with CIDB as per the bid notice and requirements. It is the responsibility of the bidder to keep the status on CIDB active throughout the bidding process (advert till award stage).
4. Bidders must be a legal entity or partnership or joint venture or consortia.
5. Form of offer and Acceptance must be duly completed and signed.
6. SBD 4- Bidders Disclosure must be duly completed and signed. In the event that the bidder or any its directors / trustees / shareholders / members / partners or any person having a controlling interest in the enterprise have any interest in any other related enterprise whether or not they are bidding for this contract, such interest must be disclosed on question 2.3.1.
7. Attendance to compulsory briefing session. Failure to attend the meeting will lead to disqualification of the offer submitted.
8. If a service provider is not a VAT Vendor but include VAT in its prices, the successful service provider will be requested to register as a VAT Vendor with SARS, after issuing of an appointment letter. VAT vendors must include VAT at 15% in their bid offer(s).
9. Only one offer per item per bidder is allowed and alternative offers will not be considered. If more than one offer per item is received, none of the offers will be considered. Bidders are also

not allowed to submit a bid/ quotation whilst they are in agreements with other bidders in the form of joint ventures or consortiums.

10. This tender will be awarded as a whole. All trades listed in the Bills of Quantities or Pricing schedule must be priced for (except provisional sums and allowances), failure to do so will result increase commercial risk of the bid and may lead to elimination or passing over of the bidder.
11. Resolution to Sign (where applicable) must be duly completed and signed.
12. Attendance of compulsory briefing session, failure to attend the briefing session will lead to immediate disqualification.

B. Other Conditions of bid - Non Eliminating:

1. DPW & I Policy applies (the Department of Public Works & Infrastructure SCM policy applies.)
2. The bidder must be registered on the Central Supplier Database (CSD) prior the award.
3. All bidders' tax matters must be in order prior award. Bidders' tax matters will be verified through CSD.
4. Failure to complete section 5: SUB-CONTRACTING as per the SBD 6.1, will automatically results in the non-awarding of points for B-BBEE.
5. Should the bidder intend to sub-contract more than 25%, it is compulsory to submit valid original or valid certified copy of B-BBEE certificates OR a valid original or valid certified copy of a Sworn Affidavit attested by a Commissioner of Oaths (for EMEs/QSEs) for all proposed sub-contractors. Failure will automatically result in no points awarded for B-BBEE, irrespective if the main bidder submitted an original or certified copy of his/her own B-BBEE certificate.
6. A valid original or valid certified copy of B-BBEE certificate shall be submitted with the bid OR a valid original or valid certified copy of a Sworn Affidavit attested by a Commissioner of Oaths prepared and issued in terms of the amended B-BBEE Construction Sector Codes (CSC000) shall be submitted in order to qualify for preference points for B-BBEE. In case of a joint venture or consortium a valid original or certified copy of B-BBEE certificate must submit a consolidated B-BBEE certificate. In case of EMEs/QSEs submitting separate Sworn Affidavits, the EME or QSE with the lowest B-BBEE contributor will be used for purposes of calculating points. Bidders are encouraged to either consolidate their B-BBEE point calculations or form joint ventures with partners which have the same level of B-BBEE contribution or higher. Failure to comply with this, will automatically results in the non-awarding of points for B-BBEE.
7. The Department will contract with the successful bidder by signing a formal contract.
8. Wherever a brand name is specified in this document (i.e. specifications, pricing schedule, bill of quantities or anywhere), the department requires an item similar/equivalent or better.
9. The successful tenderer (after being informed) will be required to bring along an unsigned copy of the form of contract to be signed by parties (e.g. GCC 2nd Edition of July 2010 original copy).
10. The client reserves the right to intervene and/or assist in the selection of local sub-contractors, during contract administration.
11. Returnable Schedule: SBD 1- Invitation to bid shall be completed and signed
12. Returnable Documents: Company Details shall be completed
13. Returnable Documents: Company Composition shall be completed
14. Bidders shall submit a minimum of one (1) written contactable reference for projects successfully completed in the past (clearly indicating client name, contract value, contract term, contact person, contact details). This is not an elimination factor, but important for the department to make a decision.
15. Bidders shall submit a list of projects where he or she has submitted tender offers but tender results have not been confirmed by the client. This is not an elimination factor, but important for the department to make a decision. Unless it is used for Quality/functionality Points.
16. The bidder shall also list all projects where there are pending litigations or litigations have been concluded. This is not an elimination factor, but important for the department to make a decision.
17. Declaration for Validity of Information Provided shall be completed.
18. If the offer (any of the items quoted for) is "Vat Inclusive", the VAT registration number of service provider shall be indicated on SBD1.

STAGE THREE: EVALUATION POINTS ON PRICE AND B-BBEE REGULATIONS OF 2017

The 80/20 preference point system shall be applied for the purposes of this bid as per the requirements of the Preferential Procurement Policy Framework Act, 2000 (Act No. 5 of 2000) and B- BBEE/ PPPFA Regulations of 2017

CriteriaPoints

POINTS ON PRICE 80

B-BBEE 20

TOTAL 100

The 80/20 preference point system for acquisition of services, works or goods up to Rand value of R50 million:

(a) The following formula must be used to calculate the points for price in respect of tenders (including price quotation) with a Rand value equal to, or above R 30 000 and up to Rand value of R 50 000 000 (all applicable taxes included):

$$Ps = 80\left(1 - \frac{Pt - P\min}{P\min}\right)$$

5.13	**Other conditions of Tender offers:** a) the tenderer is registered on the Central Supplier Database (CSD) for the South African government (see https://secure.csd.gov.za/) unless it is a foreign supplier with no local registered entity b) the tenderer is in good standing with SARS according to the Central Supplier Database. Bidders must submit a CSD no. or tax status compliance pin. c) The bidder is registered with the Construction Industry Development Board in an appropriate contractor grading designation; d) the preferred bidder will be required to submit an approved insurer undertaking to provide the Public Liability Insurance, Works Insurance and other applicable insurances. e) the tenderer or any of its directors/shareholders is not listed on the Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector; f) the tenderer has not: i) abused the Employer's Supply Chain Management System; or ii) failed to perform on any previous contract and has been given a written notice to this effect; g) the bidder has duly completed and signed the **Form of Offer, SBD 4.** Incomplete or unsigned or poorly completed forms will lead to a bidder being declared non- responsive. No second chance will be afforded to a bidder to come and complete or sign an information. h) Bids which are late, incomplete, unsigned or submitted by facsimile or electronically will not be accepted. i) the tenderer is registered and in good standing with the compensation fund or with a licensed compensation insurer; j) The tenderer undertakes to maximize the sourcing of building material or infrastructure input material from Eastern Cape based suppliers or manufacturers. k) the employer is reasonably satisfied that the tenderer has in terms of the Construction Regulations, 2014, issued in terms of the Occupational Health and Safety Act, 1993, the necessary competencies and resources to carry out the work safely. l) the tender has offered a market related offer. If the offer is believed not to be market related, the department through its Supply Chain Management bid committees will attempt to negotiate the offer with identified bidder/s to a reasonable amount. Bidders are not allowed to increase their tender offers during this process. m) Prospective bidders must register on CSD prior award. Any prospective bidder found to have Tax matters not in order with SARS (verified through CSD) during the evaluation process (after being given an opportunity to rectify tax matters) will be eliminated and not be considered further in the process. Preferred bidder/s will be afforded an opportunity to rectify their tax affairs within 7 days. A bidder that fails to rectify its tax matters with SARS will be eliminated. n) **NOTE:** The amount reflected on the Form of Offer and Acceptance takes precedence over any other total amount indicated elsewhere in bidder's tender submission. If the Form of Offer and Acceptance has no value or figure, the bidder will be regarded as having made no offer. o) The department reserves the right not to award the bid to the most favorable tenderer, if any of the situations occur: if it is not assisting in the advancement of designated groups; risk profile of the favorable firm is too high; the bidder has been awarded a considerable number of projects by the department; has performed unsatisfactorily in the past.
5.17	The number of paper copies of the signed contract to be provided by the employer is 1.

T.2.1	***A. List of returnable documents***
1	**Documentation to demonstrate eligibility to have tenders evaluated I.e.** *List all documentation to demonstrate eligibility to have a submission evaluated.* • Appropriate CIDB grading suitable for the works (as stated under T1.1) • Form of Offer and Acceptance • Final Summary (Bills of Quantities) • SBD 4, 6.2 and annexure C • Record of addenda issued (Only if addenda is issued)
2	**Returnable Schedules required for tender evaluation purposes** • Details of the Project Team and CV with Qualifications & Proof of registration (where applicable) completed for each individual of proposed team, • Record of projects: current or past projects,
3	**Other documents required for tender evaluation purposes** The tenderer must provide the following returnable documents: • A CSD report for a contractor with valid and correct information. • A valid original or certified copy of B-BBEE Status Level Verification certificate OR a valid original or certified copy of a Sworn Affidavit attested by a Commissioner of Oaths
4	**Returnable Schedules that will be used for tender evaluation purposes and be incorporated into the contract** The tenderer must complete the following returnable documents: • A duly completed form of Offer and Acceptance.
5	Only authorized signatories may sign the original and all copies of the tender offer where required. In the case of a Bid being submitted on behalf of a **company, close corporation or partnership**, evidence must be submitted to the Department at the time of submission of the Bid that the Bid has been signed by persons properly authorised thereto by resolution of the directors or under the articles of the entity. Furthermore, In the case of a **joint venture or consortium,** at least one directors/ members of each party to the joint venture or consortium must give consent to give authorisation for signatory to this bid. In the event that a resolution to sign **is not completed by all directors/ members of the enterprise**, the signature of any one of the directors or members to this bid will bind all the directors/ members of the enterprise and will therefore render the bid valid. No authority to sign is required from a company or close corporation or partnership which has **only one director or member**. In the event that a **non-member/ non-director to the enterprise** sign this declaration, and no authority is granted, it will automatically invalidate the bid. **Accept that failure to submit proof of authorization to sign (where applicable), will result in the tender offer being regarded as non-responsive**
6	**Information and data to be completed in all respects** Accept that tender offers, which do not provide all the data or information requested completely and, in the form, required, may be regarded by the employer as nonresponsive.
7	**Canvassing and obtaining of additional information by tenderers** The Tenderer shall not make any attempt either directly or indirectly to canvass any of the Employer's officials or the Employer's agent in respect of his tender, after the opening of the tenders but prior to the Employer arriving at a decision thereon. The Tenderer shall not make any attempt to obtain particulars of any relevant information, other than that disclosed at the opening of tenders.

8	**Prohibitions on awards to persons in service of the state** The Employer is prohibited to award a tender to a person - *a)* who is in the service of the state; or *b)* if that person is not a natural person, of which any director, manager, principal shareholder or stakeholder is a person in the service of the state; or *c)* a person who is an advisor or consultant contracted with the Department or municipal entity. **In the service of the state** means to be - **a member of:** *a* any municipal council; *b* any provincial legislature; or *c* the National Assembly or the National Council of Provinces; *d)* a member of the board of directors of any municipal entity; *e)* an official of any Department or municipal entity; *f)* an employee of any national or provincial department; *g)* provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act No.1 of 1999); *h)* a member of the accounting authority of any national or provincial public entity; or *i)* an employee of Parliament or a provincial legislature. *j)* In order to give effect to the above, the questionnaire for the declaration of interests in the tender of persons in service of state in part T2 of this procurement document must be completed.
9	**Awards to close family members of persons in the service of the state** Accept that the notes to the Employer's annual financial statements must disclose particulars of any award of more than R2000 to a person who is a spouse, child or parent of a person in the service of the state (defined in clause 8 above), or has been in the service of the state in the previous twelve months, including - *a)* the name of that person; *b)* the capacity in which that person is in the service of the state; and *c)* the amount of the award. In order to give effect to the above, the questionnaire for the declaration of interests in the tender of persons in service of state in part T2 of this procurement document must be completed.
10	**Respond to requests from the tenderer** The employer will respond to requests for clarification up to **5 (five) working days** before the tender closing time.
11	**Opening of tender submissions** Tenders will be opened immediately after the closing time for tenders.
12	**Scoring quality / functionality** N/A
13	**Cancellation and re-invitation of tenders** An organ of state may, prior to the award of the tender, cancel the tender if- (a) due to changed circumstances, there is no longer a need for the services, works or goods requested; or (b) funds are no longer available to cover the total envisaged expenditure; or (c) no acceptable tenders are received. (d) Tender validity period has expired. (e) Gross irregularities in the tender processes or documents. (f) No market related offer received (after attempts of negotiation processes) Where applicable, the decision to cancel the tender will be published in the CIDB website and in the Tender Bulletin or the media in which the original tender invitation as advertised.
14	Where the employer terminates the contract due to default of the contractor in whole or in part, the employer may decide to: a) Refer the breach in contract to the **cidb** for investigation as a breach of the **cidb Code of Conduct** in terms of the **cidb Regulations**; or b) may impose a restriction penalty on the contractor in terms of Section 14 of the Preferential Procurement Regulations. The outcomes of such investigations in terms of both the cidb Regulations and the Preferential Procurement Regulations may prohibit the contractor from doing business with the public sector for a period not exceeding 10 years.

SBD1 – PART A – INVITATION TO BID

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE DEPARTMENT OF PUBLIC WORKS & INFRASTRUCTURE					
BID NUMBER:	CHR5-22/23-0015	**CLOSING DATE:**	**05 OCTOBER 2022**	**CLOSING TIME:**	11:00
DESCRIPTION	EXPLORATION AND INSTALLATION OF BOREHOLE AND BACKUP TANK FOR WHITTLESEA DEPOT				
BID RESPONSE DOCUMENTS MAY BE DEPOSITED IN THE BID BOX SITUATED AT *(STREET ADDRESS)*					
DEPARTMENT OF PUBLIC WORKS & INFRASTRUCTURE, GROUND FLOOR, NO. 1 CREAMERY ROAD, OLD CPA BUILDING, KOMANI					

BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO		**TECHNICAL ENQUIRIES MAY BE DIRECTED TO:**	
CONTACT PERSON	**Ms. B Mshede**	**CONTACT PERSON**	**O Mpepe**
TELEPHONE NUMBER	**045 907 6663/6624**	**TELEPHONE NUMBER**	**045 807 6707**
FACSIMILE NUMBER		**FACSIMILE NUMBER**	
E-MAIL ADDRESS	**Babalwa.Mshede@ecdpw.gov.za**	**E-MAIL ADDRESS**	**Olwethu.mpepe@ecdpw.gov.za**

SUPPLIER INFORMATION					
NAME OF BIDDER					
POSTAL ADDRESS					
STREET ADDRESS					
TELEPHONE NUMBER	CODE		NUMBER		
CELLPHONE NUMBER					
FACSIMILE NUMBER	CODE		NUMBER		
E-MAIL ADDRESS					
VAT REGISTRATION NUMBER					
SUPPLIER COMPLIANCE STATUS	TAX COMPLIANCE SYSTEM PIN:		**OR**	CENTRAL SUPPLIER DATABASE No:	MAAA
B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE	[TICK APPLICABLE BOX] Yes No		B-BBEE STATUS LEVEL SWORN AFFIDAVIT		[TICK APPLICABLE BOX] Yes No

[A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE/SWORN AFFIDAVIT(FOR EMEs& QSEs) MUST BE SUBMITTED IN ORDER TO QUALIFY FOR PREFERENCE POINTS FOR B-BBEE]

ARE YOU THE ACCREDITED REPRESENTATIVE **IN SOUTH AFRICA FOR THE GOODS /SERVICES /WORKS OFFERED?**	Yes No [IF YES ENCLOSE PROOF]	ARE YOU A FOREIGN BASED SUPPLIER FOR **THE GOODS /SERVICES /WORKS OFFERED?**	Yes No [IF YES ANSWER THE FOLLOWING]

QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS

IS THE ENTITY A RESIDENT OF THE REPUBLIC OF SOUTH AFRICA (RSA)?	YES	NO
DOES THE ENTITY HAVE A BRANCH IN THE RSA?	YES	NO
DOES THE ENTITY HAVE A PERMANENT ESTABLISHMENT IN THE RSA?	YES	NO
DOES THE ENTITY HAVE ANY SOURCE OF INCOME IN THE RSA?	YES	NO
IS THE ENTITY LIABLE IN THE RSA FOR ANY FORM OF TAXATION?	YES	NO

IF THE ANSWER IS "NO" TO ALL OF THE ABOVE, THEN IT IS NOT A REQUIREMENT TO REGISTER FOR A TAX COMPLIANCE STATUS SYSTEM PIN CODE FROM THE SOUTH AFRICAN REVENUE SERVICE (SARS) AND IF NOT REGISTER AS PER 2.3 BELOW.

PART B: TERMS AND CONDITIONS FOR BIDDING

1.	**BID SUBMISSION:**
1.1.	BIDS MUST BE DELIVERED BY THE STIPULATED TIME TO THE CORRECT ADDRESS. LATE BIDS WILL NOT BE ACCEPTED FOR CONSIDERATION.
1.2.	**ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS PROVIDED–(NOT TO BE RE-TYPED) OR IN THE MANNER PRESCRIBED IN THE BID DOCUMENT.**
1.3.	THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT 2000 AND THE PREFERENTIAL PROCUREMENT REGULATIONS, 2017, THE GENERAL CONDITIONS OF CONTRACT (GCC) AND, IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT.
1.4.	**THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FILL IN AND SIGN A WRITTEN CONTRACT FORM (SBD7).**
2.	**TAX COMPLIANCE REQUIREMENTS**
2.1	BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIGATIONS.
2.2	BIDDERS ARE REQUIRED TO SUBMIT THEIR UNIQUE PERSONAL IDENTIFICATION NUMBER (PIN) ISSUED BY SARS TO ENABLE THE ORGAN OF STATE TO VIEW THE TAXPAYER'S PROFILE AND TAX STATUS.
2.3	APPLICATION FOR TAX COMPLIANCE STATUS (TCS) PIN MAY BE MADE VIA E-FILING THROUGH THE SARS WEBSITE WWW.SARS.GOV.ZA.
2.4	BIDDERS MAY ALSO SUBMIT A PRINTED TCS CERTIFICATE TOGETHER WITH THE BID.
2.5	IN BIDS WHERE CONSORTIA / JOINT VENTURES / SUB-CONTRACTORS ARE INVOLVED, EACH PARTY MUST SUBMIT A SEPARATE TCS CERTIFICATE / PIN / CSD NUMBER.
2.6	WHERE NO TCS IS AVAILABLE BUT THE BIDDER IS REGISTERED ON THE CENTRAL SUPPLIER DATABASE (CSD), A CSD NUMBER MUST BE PROVIDED.
2.7	NO BIDS WILL BE CONSIDERED FROM PERSONS IN THE SERVICE OF THE STATE, COMPANIES WITH DIRECTORS WHO ARE PERSONS IN THE SERVICE OF THE STATE, OR CLOSE CORPORATIONS WITH MEMBERS PERSONS IN THE SERVICE OF THE STATE."

NB: FAILURE TO PROVIDE / OR COMPLY WITH ANY OF THE ABOVE PARTICULARS MAY RENDER THE BID INVALID.

SIGNATURE OF THE BIDDER : _____

CAPACITY UNDER WHICH THIS BID IS SIGNED : _____
(Proof of authority where applicable must be submitted e.g. company resolution)

DATE : _____

PART T2: RETURNABLE DOCUMENTS

T2. RETURNABLE SCHEDULES

T2.1 SBD 6.2: Declaration Certificate for Local Production and Content for Designated Sectors

This Standard Bidding Document (SBD) must form part of all bids invited. It contains general information and serves as a declaration form for local content (local production and local content are used interchangeably).

Before completing this declaration, bidders must study the General Conditions, Definitions, Directives applicable in respect of Local Content as prescribed in the Preferential Procurement Regulations, 2017, the South African Bureau of Standards (SABS) approved technical specification number SATS 1286:2011 (Edition 1) and the Guidance on the Calculation of Local Content together with the Local Content Declaration Templates [Annex C (Local Content Declaration: Summary Schedule), D (Imported Content Declaration: Supporting Schedule to Annex C) and E (Local Content Declaration: Supporting Schedule to Annex C)].

1. General Conditions

1.1. Preferential Procurement Regulations, 2017 (Regulation 8) make provision for the promotion of local production and content.

1.2. Regulation 8.(2) prescribes that in the case of designated sectors, organs of state must advertise such tenders with the specific bidding condition that only locally produced or manufactured goods, with a stipulated minimum threshold for local production and content will be considered.

1.3. Where necessary, for tenders referred to in paragraph 1.2 above, a two stage bidding process may be followed, where the first stage involves a minimum threshold for local production and content and the second stage price and B-BBEE.

1.4. A person awarded a contract in relation to a designated sector, may not sub-contract in such a manner that the local production and content of the overall value of the contract is reduced to below the stipulated minimum threshold.

1.5. The local content (LC) expressed as a percentage of the bid price must be calculated in accordance with the SABS approved technical specification number SATS 1286: 2011 as follows:

$$LC = [1 - x / y] * 100$$

Where
x is the imported content in Rand
y is the bid price in Rand excluding value added tax (VAT)

Prices referred to in the determination of x must be converted to Rand (ZAR) by using the exchange rate published by South African Reserve Bank (SARB) at 12:00 on the date of advertisement of the bid as indicated in paragraph 4.1 below.

The SABS approved technical specification number SATS 1286:2011 is accessible on http:/www.thedti.gov.za/industrial development/ip.jsp at no cost.

1.6. A bid may be disqualified if this Declaration Certificate and the Annex C (Local Content Declaration: Summary Schedule) are not submitted as part of the bid documentation;

2. The stipulated minimum threshold(s) for local production and content (refer to Annex A of SATS 1286:2011) for this bid is/are as follows:

Sector	Category	Stipulated minimum threshold
Electrical Cables	4mm2, 3-core Electrical cable	90%

Sector	Category	Stipulated minimum threshold
Plastic Pipes	• 25mm class 10 High Density Polyethylene (HDPE) water pipes • 50mm class 10 High Density Polyethylene (HDPE) water pipes • 15mm class 10 10 High Density Polyethylene (HDPE) water pipes	100%

3. Does any portion of the goods or services offered have any imported content?

(***Tick applicable box***)

YES		NO	

3..1 If yes, the rate(s) of exchange to be used in this bid to calculate the local content as prescribed in paragraph 1.5 of the general conditions must be the rate(s) published by SARB for the specific currency at 12:00 on the date of advertisement of the bid.

The relevant rates of exchange information is accessible on www.reservebank.co.za

Indicate the rate(s) of exchange against the appropriate currency in the table below (refer to Annex A of SATS 1286:2011):

Currency	Rates of exchange
US Dollar	
Pound Sterling	
Euro	
Yen	
Other	

NB: Bidders must submit proof of the SARB rate (s) of exchange used.

3. Where, after the award of a bid, challenges are experienced in meeting the stipulated minimum threshold for local content the dti must be informed accordingly in order for the dti to verify and in consultation with the AO/AA provide directives in this regard.

LOCAL CONTENT DECLARATION
(REFER TO ANNEX B OF SATS 1286:2011)

LOCAL CONTENT DECLARATION BY CHIEF FINANCIAL OFFICER OR OTHER LEGALLY RESPONSIBLE PERSON NOMINATED IN WRITING BY THE CHIEF EXECUTIVE OR SENIOR MEMBER/PERSON WITH MANAGEMENT RESPONSIBILITY (CLOSE CORPORATION, PARTNERSHIP OR INDIVIDUAL)

IN RESPECT OF BID NO.: CHR5-22/23-0015

ISSUED BY: Eastern Cape Department of Public Works & Infrastructure

1 The obligation to complete, duly sign and submit this declaration cannot be transferred to an external authorized representative, auditor or any other third party acting on behalf of the bidder.

2 Guidance on the Calculation of Local Content together with Local Content Declaration Templates (Annex C, D and E) is accessible on http://www.thdti.gov.za/industrial_development/ip.jsp. Bidders should first complete Declaration D. After completing Declaration D, bidders should complete Declaration E and then consolidate the information on Declaration C. **Declaration C should be submitted with the bid documentation at the closing date and time of the bid in order to substantiate the declaration made in paragraph (c) below.** Declarations D and E should be kept by the bidders for verification purposes for a period of at least 5 years. The successful bidder is required to continuously update Declarations C, D and E with the actual values for the duration of the contract.

I, the undersigned, ...(full names), do hereby declare, in my capacity as …… ……
of .....(name of bidder entity), the following:

(a) The facts contained herein are within my own personal knowledge.

(b) I have satisfied myself that:

(i) the goods/services/works to be delivered in terms of the above-specified bid comply with the minimum local content requirements as specified in the bid, and as measured in terms of SATS 1286:2011; and

(c) The local content percentage (%) indicated below has been calculated using the formula given in clause 3 of SATS 1286:2011, the rates of exchange indicated in paragraph 4.1 above and the information contained in Declaration D and E which has been consolidated in Declaration C:

Bid price, excluding VAT (y)	R
Imported content (x), as calculated in terms of SATS 1286:2011	R
Stipulated minimum threshold for local content (paragraph 3 above)	
Local content %, as calculated in terms of SATS 1286:2011	

If the bid is for more than one product, the local content percentages for each product contained in Declaration C shall be used instead of the table above.
The local content percentages for each product has been calculated using the formula given in clause 3 of SATS 1286:2011, the rates of exchange indicated in paragraph 4.1 above and the information contained in Declaration D and E.

(d) I accept that the Procurement Authority / Institution has the right to request that the local content be verified in terms of the requirements of SATS 1286:2011.

(e) I understand that the awarding of the bid is dependent on the accuracy of the information furnished in this application. I also understand that the submission of incorrect data, or data that are not verifiable as described in SATS 1286:2011, may result in the Procurement Authority / Institution

imposing any or all of the remedies as provided for in Regulation 14 of the Preferential Procurement Regulations, 2017 promulgated under the Preferential Policy Framework Act (PPPFA), 2000 (Act No. 5 of 2000).

SIGNATURE: _____ **DATE:** _____

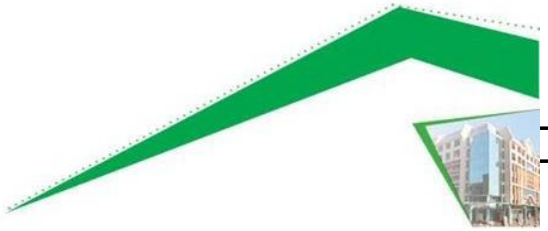
WITNESS No. 1 _____ **DATE:** _____

WITNESS No. 2 _____ **DATE:** _____

T2.2 Annex C: Local Content Declaration Summary Schedule

ANNEXURES FOR LOCAL PRODUCTION AND CONTENT FOR DESIGNATED SECTORS

Province of the
EASTERN CAPE
PUBLIC WORKS & INFRASTRUCTURE



SATS 1286.2011

Annex C

Local Content Declaration - Summary Schedule

(C1)	**Tender No.**	**CHR5-22/23-0015**
(C2)	**Tender description:**	**EXPLORATION AND INSTALLATION OF BOREHOLE AND BACKUP TANK FOR WHITTLESEA DEPOT**
(C3)	**Designated product(s)**	Electric & Telecom Cables (Low Voltage)
(C4)	**Tender Authority:**	
(C5)	**Tendering Entity name:**	Department of Public Works & Infrastructure and Infrastructure
(C6)	**Tender Exchange Rate:**	Pula [ ] EU [ ] GBP [ ]
(C7)	**Specified local content %**	90%

Note: VAT to be excluded from all calculations

		Calculation of local content						Tender summary			
Tender item no's	List of items	Tender price - each (excl. VAT)	Exempted imported value	Tender value net of exempted imported content	Imported value	Local value	Local content % (per item)	Tender Qty	Total tender value	Total exempted imported content	Total Imported content
(C8)	*(C9)*	*(C10)*	*(C11)*	*(C12)*	*(C13)*	*(C14)*	*(C15)*	*(C16)*	*(C17)*	*(C18)*	*(C19)*
7.3	4mm², 3-core Electrical cable						90%	250m	R	R	R

(C20) **Total tender value**

Signature of tenderer from Annex. B

(C21) **Total Exempt imported content**

(C22) Total **Tender value net of exempt imported content**

(C23) **Total Imported content**

(C24) **Total local content**

(C25) **Average local content % of tender**

Date: _____

Annex D

Imported Content Declaration - Supporting Schedule to Annex C

	Tender No.	CHR5-21/22-0015
(D1)	**Tender description:**	EXPLORATION AND INSTALLATION OF BOREHOLE AND BACKUP TANK FOR WHITTLESEA DEPOT
(D2)	**Designated Products:**	Electric & Telecom Cables (Low Voltage)
(D3)	**Tender Authority:**	Department of Public Works and Infrrastructure
(D4)	**Tendering Entity name:**	
(D5)	**Tender Exchange Rate:**	Pula

Note: VAT to be excluded from all calculations

(D6) EU R 9,00 GBP R 12,00

A. Exempted imported content

value	Tender item no's	Description of imported content	Local supplier	Overseas Supplier	Foreign currency value as per Commercial Invoice	Tender Exchange Rate	Local value of imports	Freight costs to port of entry	All locally incurred landing costs & duties	Total landed cost excl VAT
(D17)	(D7)	(D8)	(D9)	(D10)	(D11)	(D12)	(D13)	(D14)	(D15)	(D16)

Calculation of imported content

Summary

Tender Qty	Exempted imported
	(D18)

(D19) Total exempt imported value

This total must correspond with

B. Imported directly by the Tenderer

Tender item no's	Description of imported content	Unit of measure	Overseas Supplier	Foreign currency value as per Commercial Invoice	Tender Rate of Exchange	Local value of imports	Freight costs to port of entry	All locally incurred landing costs & duties	Total landed cost excl VAT
(D20)	(D21)	(D22)	(D23)	(D24)	(D25)	(D26)	(D27)	(D28)	(D29)

Calculation of imported content

Tender Qty	Total imported value
	(D31)

(D30)

(D32) Total imported value by tenderer

C. Imported by a 3rd party and supplied to the Tenderer

Description of imported content	Unit of measure	Local supplier	Overseas Supplier	Foreign currency value as per Commercial Invoice	Tender Rate of Exchange	Local value of imports	Freight costs to port of entry	All locally incurred landing costs & duties	Total landed cost excl VAT
(D33)	(D34)	(D35)	(D36)	(D37)	(D38)	(D39)	(D40)	(D41)	(D42)

Calculation of imported content

Quantity imported	Total imported value
(D43)	(D44)

(D45) Total imported value by 3rd party

B. Other foreign currency payments

Type of payment	Local supplier making the payment	Overseas beneficiary	Foreign currency value paid	Tender Rate of Exchange
(D46)	(D47)	(D48)	(D49)	(D50)

Calculation of foreign currency payments

Summary of payments

Local value of payments

(D51)

(D52) Total of foreign currency payments declared by tenderer and/or 3rd party

(D53) Total of imported content & foreign currency payments - *(D32), (D45) & (D52)* above

This total must correspond w Annex C - C 23

Signature of tenderer from Annex B

Date:

Annex E

Local Content Declaration - Supporting Schedule to Annex C

(E1)	**Tender No.**	CHR5-22/23-0015
(E2)	**Tender description:**	EXPLORATION AND NSTALLATION OF BOREHOLE AND BACKUP TANK FOR WHITTLESEA DEPOT
(E3)	**Designated products:**	Electric & Telecom Cables (Low Voltage)
(E4)	**Tender Authority:**	
(E5)	**Tendering Entity name:**	Department of Public Works and Infrastructure

Note: VAT to be excluded from all calculations

Local Products (Goods, Services and Works)	Description of items purchased	Local suppliers	Value
	(E6)	*(E7)*	*(E8)*
		***(E9)* Total local products (Goods, Services and Works)**	

(E10) **Manpower costs** (Tenderer's manpower cost)

(E11) **Factory overheads** (Rental, depreciation & amortisation, utility costs, consumables etc.)

(E12) **Administration overheads and mark-up** (Marketing, insurance, financing, interest etc.)

***(E13)* Total local content**

This total must correspond with Annex C - C24

Signature of tenderer from Annex B

Date: _____

Annex C

Local Content Declaration - Summary Schedule

(C1)	**Tender No.**	
(C2)	**Tender description:**	**EXPLORATION AND INSTALLATION OF BOREHOLE AND BACKUP TANK FOR WHITTLESEA DEPOT**
(C3)	**Designated product(s)**	Pastic Pipes (HDPE Conveyance Pipes)
(C4)	**Tender Authority:**	
(C5)	**Tendering Entity name:**	Department of Public Works & Infrastructure
(C6)	**Tender Exchange Rate:**	Pula [ ] EU [ ] GBP [ ]
(C7)	**Specified local content %**	100%

Note: VAT to be excluded from all calculations

Calculation of local content								Tender summary			
Tender item no's	**List of items**	**Tender price - each (excl VAT)**	**Exempted imported value**	**Tender value net of exempted imported content**	**Imported value**	**Local value**	**Local content % (per item)**	**Tender Qty**	**Total tender value**	**Total exempted imported content**	**Total Imported content**
(C8)	*(C9)*	*(C10)*	*(C11)*	*(C12)*	*(C13)*	*(C14)*	*(C15)*	*(C16)*	*(C17)*	*(C18)*	*(C19)*
7.1	25mm Ø Class 10 HDPE water pipe						100%	250m			
7.2	50mm Ø Class 10 HDPE water pipe						100%	200m			
7.3	15mm Ø Class 10 HDPE water pipe						100%	200m			

Signature of tenderer from Annex B

Date: _____

***(C20)* Total tender value**	
***(C21)* Total Exempt imported content**	
***(C22) Total* Tender value net of exempt imported content**	
***(C23)* Total Imported content**	
***(C24)* Total local content**	
***(C25)* Average local content % of tender**	

Annex D

Imported Content Declaration - Supporting Schedule to Annex C

(D1)	**Tender No.**	CHR5-21/22-0015
(D2)	**Tender description:**	EXPLORATION AND INSTALLATION OF BOREHOLE AND BACKUP TANK FOR WHITTLESEA DEPOT
(D3)	**Designated Products:**	Pastic Pipes (HDPE Conveyance Pipes)
(D4)	**Tender Authority:**	
(D5)	**Tendering Entity name:**	Department of Public Works and Infrastructure
	Tender Exchange Rate:	Pula

Note: VAT to be excluded from all calculations

(D6) EU R 9,00 GBP R 12,00

A. Exempted imported content

Tender item no's	Description of imported content	Local supplier	Overseas Supplier	Calculation of imported content: Forign currency value as per Commercial Invoice	Tender Exchange Rate	Local value of imports	Freight costs to port of entry	All locally incurred landing costs & duties	Total landed cost excl VAT	Tender Qty	Exempted imported value
(D7)	(D8)	(D9)	(D10)	(D11)	(D12)	(D13)	(D14)	(D15)	(D16)		(D17)

(D19) Total exempt imported value

B. Imported directly by the Tenderer

Tender item no's	Description of imported content	Unit of measure	Overseas Supplier	Calculation of imported content: Forign currency value as per Commercial Invoice	Tender Rate of Exchange	Local value of imports	Freight costs to port of entry	All locally incurred landing costs & duties	Total landed cost excl VAT	Tender Qty	Total imported value
(D20)	(D21)	(D22)	(D23)	(D24)	(D25)	(D26)	(D27)	(D28)	(D29)		(D30)
											(D31)

(D32) Total imported value by tenderer

C. Imported by a 3rd party and supplied to the Tenderer

Description of imported content	Unit of measure	Local supplier	Overseas Supplier	Calculation of imported content: Foreign currency value as per Commercial Invoice	Tender Rate of Exchange	Local value of imports	Freight costs to port of entry	All locally incurred landing costs & duties	Total landed cost excl VAT	Quantity imported	Total imported value
(D33)	(D34)	(D35)	(D36)	(D37)	(D38)	(D39)	(D40)	(D41)	(D42)	(D43)	(D44)

(D45) Total imported value by 3rd party

D. Other foreign currency payments

Type of payment	Local supplier making the payment	Overseas beneficiary	Calculation of foreign currency payments: Foreign currency value paid	Tender Rate of Exchange	
(D46)	(D47)	(D48)	(D49)	(D50)	(D51)

(D52) Total of foreign currency payments declared by tenderer and/or 3rd party

(D53) Total of imported content & foreign currency payments - *(D32), (D45) & (D52)* above

Signature of tenderer from Annex B

Date:

Annex E

Local Content Declaration - Supporting Schedule to Annex C

(E1)	**Tender No.**	CHR5-22/23-0015
(E2)	**Tender description:**	EXPLORATION AND INSTALLATION OF BOREHOLE AND BACKUP TANK FOR WHITTLESEA DEPOT
(E3)	**Designated products:**	Pastic Pipes (HDPE Conveyance Pipes)
(E4)	**Tender Authority:**	
(E5)	**Tendering Entity name:**	Department of Public Works and Infrastructure

Note: VAT to be excluded from all calculations

Local Products (Goods, Services and Works)	Description of items purchased	Local suppliers	Value
	(E6)	*(E7)*	*(E8)*
		***(E9)* Total local products (Goods, Services and Works)**	

(E10) **Manpower costs** (Tenderer's manpower cost)

(E11) **Factory overheads** (Rental, depreciation & amortisation, utility costs, consumables etc.)

(E12) **Administration overheads and mark-up** (Marketing, insurance, financing, interest etc.)

***(E13)* Total local content**

This total must correspond with Annex C - C24

Signature of tenderer from Annex B

Date: _____

T2.3 SBD 4 – Bidder's Disclosure

BIDDER'S DISCLOSURE

1. PURPOSE OF THE FORM

Any person (natural or juristic) may make an offer or offers in terms of this invitation to bid. In line with the principles of transparency, accountability, impartiality, and ethics as enshrined in the Constitution of the Republic of South Africa and further expressed in various pieces of legislation, it is required for the bidder to make this declaration in respect of the details required hereunder.

Where a person/s are listed in the Register for Tender Defaulters and / or the List of Restricted Suppliers, that person will automatically be disqualified from the bid process.

2. Bidder's declaration

2.1 Is the bidder, or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest1 in the enterprise, employed by the state? **YES/NO**

2.1.1 If so, furnish particulars of the names, individual identity numbers, and, if applicable, state employee numbers of sole proprietor/ directors / trustees / shareholders / members/ partners or any person having a controlling interest in the enterprise, in table below.

Full Name	**Identity Number**	**Name of State institution**

2.2 Do you, or any person connected with the bidder, have a relationship with any person who is employed by the procuring institution? **YES/NO**

2.2.1 If so, furnish particulars:

……

……

2.3 Does the bidder or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest in the enterprise have any interest in any other related enterprise whether or not they are bidding for this contract? **YES/NO**

[1] the power, by one person or a group of persons holding the majority of the equity of an enterprise, alternatively, the person/s having the deciding vote or power to influence or to direct the course and decisions of the enterprise.

2.3.1 If so, furnish particulars:

……

……

3 DECLARATION

I, the undersigned, (name)…… in submitting the accompanying bid, do hereby make the following statements that I certify to be true and complete in every respect:

3.1 I have read and I understand the contents of this disclosure;

3.2 I understand that the accompanying bid will be disqualified if this disclosure is found not to be true and complete in every respect;

3.3 The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However, communication between partners in a joint venture or consortium2 will not be construed as collusive bidding.

3.4 In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications, prices, including methods, factors or formulas used to calculate prices, market allocation, the intention or decision to submit or not to submit the bid, bidding with the intention not to win the bid and conditions or delivery particulars of the products or services to which this bid invitation relates.

3.4 The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.

3.5 There have been no consultations, communications, agreements or arrangements made by the bidder with any official of the procuring institution in relation to this procurement process prior to and during the bidding process except to provide clarification on the bid submitted where so required by the institution; and the bidder was not involved in the drafting of the specifications or terms of reference for this bid.

3.6 I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

I CERTIFY THAT THE INFORMATION FURNISHED IN PARAGRAPHS 1, 2 and 3 ABOVE IS CORRECT.
I ACCEPT THAT THE STATE MAY REJECT THE BID OR ACT AGAINST ME IN TERMS OF PARAGRAPH 6 OF PFMA SCM INSTRUCTION 03 OF 2021/22 ON PREVENTING AND COMBATING ABUSE IN THE SUPPLY CHAIN MANAGEMENT SYSTEM SHOULD THIS DECLARATION PROVE TO BE FALSE.

…… ……
Signature Date

…… ……
Position Name of bidder

[2] Joint venture or Consortium means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract.

T2.4 SBD 6.1 - Preference Points Claim Form in terms of the Preferential Procurement Regulation 2017

This preference form must form part of all bids invited. It contains general information and serves as a claim form for preference points for Broad-Based Black Economic Empowerment (B-BBEE) Status Level of Contribution

NB: BEFORE COMPLETING THIS FORM, BIDDERS MUST STUDY THE GENERAL CONDITIONS, DEFINITIONS AND DIRECTIVES APPLICABLE IN RESPECT OF B-BBEE, AS PRESCRIBED IN THE PREFERENTIAL PROCUREMENT REGULATIONS, 2017.

1. GENERAL CONDITIONS

1.1 The following preference point systems are applicable to all bids:

- the 80/20 system for requirements with a Rand value of up to R50 000 000 (all applicable taxes included);

1.2 a) The value of this bid is estimated to not exceed R50 000 000 (all applicable taxes included) and therefore the **80/20** preference point system shall be applicable;

1.3 Points for this bid shall be awarded for:

(a) Price; and

(b) B-BBEE Status Level of Contributor.

1.4 The maximum points for this bid are allocated as follows:

	POINTS
PRICE	80
B-BBEE STATUS LEVEL OF CONTRIBUTOR	20
Total points for Price and B-BBEE must not exceed	**100**

1.5 Failure on the part of a bidder to submit proof of B-BBEE Status level of contributor together with the bid, will be interpreted to mean that preference points for B-BBEE status level of contribution are not claimed.

1.6 The purchaser reserves the right to require of a bidder, either before a bid is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the purchaser.

2. DEFINITIONS

(a) **"B-BBEE"** means broad-based black economic empowerment as defined in section 1 of the Broad-Based Black Economic Empowerment Act;

(b) "**B-BBEE status level of contributor"** means the B-BBEE status of an entity in terms of a code of good practice on black economic empowerment, issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act;

(c) **"bid"** means a written offer in a prescribed or stipulated form in response to an invitation by an organ of state for the provision of goods or services, through price quotations, advertised competitive bidding processes or proposals;

(d) **"Broad-Based Black Economic Empowerment Act"** means the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);

(e) **"EME"** means an Exempted Micro Enterprise in terms of a code of good practice on black economic empowerment issued in terms of section 9 (1) of the Broad-Based Black Economic Empowerment Act;

(f) **"functionality"** means the ability of a tenderer to provide goods or services in accordance with specifications as set out in the tender documents.

(g) **"prices"** includes all applicable taxes less all unconditional discounts;

(h) **"proof of B-BBEE status level of contributor"** means:

1) B-BBEE Status level certificate issued by an authorized body or person;

2) A sworn affidavit as prescribed by the B-BBEE Codes of Good Practice;

3) Any other requirement prescribed in terms of the B-BBEE Act;

(i) **"QSE"** means a qualifying small business enterprise in terms of a code of good practice on black economic empowerment issued in terms of section 9 (1) of the Broad-Based Black Economic Empowerment Act;

(j) **"rand value"** means the total estimated value of a contract in Rand, calculated at the time of bid invitation, and includes all applicable taxes;

3. POINTS AWARDED FOR PRICE

3.1 THE 80/20 PREFERENCE POINT SYSTEMS

A maximum of 80 points is allocated for price on the following basis:

80/20

$$Ps = 80\left(1 - \frac{Pt - P\min}{P\min}\right)$$

Where

Ps = Points scored for price of bid under consideration

Pt = Price of bid under consideration

Pmin = Price of lowest acceptable bid

POINTS AWARDED FOR B-BBEE STATUS LEVEL OF CONTRIBUTOR

3.2 In terms of Regulation 6 (2) and 7 (2) of the Preferential Procurement Regulations, preference points must be awarded to a bidder for attaining the B-BBEE status level of contribution in accordance with the table below:

B-BBEE Status Level of Contributor	Number of points (90/10 system)	Number of points (80/20 system)
1	10	20
2	9	18
3	6	14
4	5	12
5	4	8
6	3	6
7	2	4
8	1	2
Non-compliant contributor	0	0

4. BID DECLARATION

4.1 Bidders who claim points in respect of B-BBEE Status Level of Contribution must complete the following:

B-BBEE STATUS LEVEL OF CONTRIBUTOR CLAIMED IN TERMS OF PARAGRAPHS 1.4 AND 4.1

B-BBEE Status Level of Contributor: . = …… (maximum of 10 or 20 points)

(Points claimed in respect of paragraph 4.1 must be in accordance with the table reflected in paragraph 3.2 and must be substantiated by relevant proof of B-BBEE status level of contributor.

5. SUB-CONTRACTING

5.1 Will any portion of the contract be sub-contracted?

(***Tick applicable box***)

YES		NO	

(a) If yes, indicate:

i) What percentage of the contract will be subcontracted _____%

ii) The name of the sub-contractor _____

iii) The B-BBEE status level of the sub-contractor _____

iv) Whether the sub-contractor is an EME or QSE_____

(Tick applicable box)

YES		NO	

Specify, by ticking the appropriate box, if subcontracting with an enterprise in terms of Preferential Procurement Regulations, 2017:

Designated Group: An EME or QSE which is at last 51% owned by:	**EME** √	**QSE** √
Black people		
Black people who are youth		
Black people who are women		
Black people with disabilities		
Black people living in rural or underdeveloped areas or townships		
Cooperative owned by black people		
Black people who are military veterans		
OR		
Any EME		
Any QSE		

6. DECLARATION WITH REGARD TO COMPANY/FIRM

6.1 Name of company/firm _____

6.2 VAT registration number _____

6.3 Company registration number _____

6.4 TYPE OF COMPANY/ FIRM

- ϒ Partnership/Joint Venture / Consortium
- ϒ One person business/sole propriety
- ϒ Close corporation
- ϒ Company
- ϒ (Pty) Limited

[TICK APPLICABLE BOX]

6.5 DESCRIBE PRINCIPAL BUSINESS ACTIVITY

_____

_____

_____

_____

6.6 COMPANY CLASSIFICATION

- ϒ Manufacturer
- ϒ Supplier
- ϒ Professional service provider
- ϒ Other service providers, e.g. transporter, etc.

[*TICK APPLICABLE BOX*]

6.7 Total number of years the company/firm has been in business:……

6.8 I/we, the undersigned, who is / are duly authorised to do so on behalf of the company/firm, certify that the points claimed, based on the B-BBE status level of contributor indicated in paragraphs 1.4 and 6.1 of the foregoing certificate, qualifies the company/ firm for the preference(s) shown and I / we acknowledge that:

i) The information furnished is true and correct;

ii) The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form;

iii) In the event of a contract being awarded as a result of points claimed as shown in paragraphs 1.4 and 6.1, the contractor may be required to furnish documentary proof to the satisfaction of the purchaser that the claims are correct;

iv) If the B-BBEE status level of contributor has been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the purchaser may, in addition to any other remedy it may have –

(a) disqualify the person from the bidding process;

(b) recover costs, losses or damages it has incurred or suffered as a result of that person's conduct;

(c) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation;

(d) recommend that the bidder or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted by the National Treasury from obtaining business from any organ of state for a period not exceeding 10 years, after the *audi alteram partem* (hear the other side) rule has been applied; and

(e) forward the matter for criminal prosecution.

WITNESSES

1. _____

2. _____

_____

SIGNATURE(S) OF BIDDERS(S)

DATE : ___/___/_____

ADDRESS : _____

_____

_____

_____

T2.7 Valid Original or Certified Copy of B-BBEE Certificate

(IF APPLICABLE, ATTACH HERE)

T2.8 Valid Original or valid certified copy of Sworn Affidavit

NB:CHOOSE ONE i.e EME or QSE!!!!)

SWORN AFFIDAVIT – B-BBEE QUALIFYING SMALL ENTERPRISE - GENERAL

I, the undersigned,

Full name & Surname	
Identity number	

Hereby declare under oath as follows:

1. The contents of this statement are to the best of my knowledge a true reflection of the facts.
2. I am a Member / Director / Owner of the following enterprise and am duly authorised to act on its behalf:

Enterprise Name:	
Trading Name (If Applicable):	
Registration Number:	
Enterprise Physical Address:	
Type of Entity (CC, (Pty) Ltd, Sole Prop etc.):	
Nature of Business:	
Definition of "Black People"	As per the Broad-Based Black Economic Empowerment Act 53 of 2003 as Amended by Act No 46 of 2013 "Black People" is a generic term which means Africans, Coloureds and Indians – (a) Who are citizens of the Republic of South Africa by birth or descent; or (b) Who became citizens of the Republic of South Africa by naturalization- i. before 27 April 1994; or ii. on or after 27 April 1994 and who would have been entitled to acquire citizenship by naturalization prior to that date
Definition of "Black Designated Groups"	"Black Designated Groups means: (a) Unemployed black people not attending and not required by the law to attend an educational institution and not awaiting admission to an educational institution; (b) Black people who are youth as defined in the National Youth Commission Act of 1996; (c) Black people who are persons with disabilities as defined in the Code of Good Practice on employment of people with disabilities issued under the Employment Equity Act; (d) Black people living in rural and under developed arears; (e) Black military veterans who qualifies to be called a military veteran in terms of the Military Veterans Act 18 of 2011;"

3. I hereby declare under Oath that:
   - The Enterprise is _____% Black Owned as per Amended Code Series 100 of the Amended Codes of Good Practice issued under section 9 (1) of B-BBEE Act No 53 of 2003 as Amended by Act No 46 of 2013,
   - The Enterprise is _____% Black Female Owned as per Amended Code Series 100 of the Amended Codes of Good Practice issued under section 9 (1) of B-BBEE Act No 53 of 2003 as Amended by Act No 46 of 2013,

- The Enterprise is _____% Black Designated Group Owned as per Amended Code Series 100 of the Amended Codes of Good Practice issued under section 9 (1) of B-BBEE Act No 53 of 2003 as Amended by Act No 46 of 2013,
- Black Designated Group Owned % Breakdown as per the definition stated above;

    - Black Youth % = _____%
    - Black Disabled % = _____%
    - Black Unemployed % = _____%
    - Black People living in Rural areas % = _____%
    - Black Military Veterans % = _____%

- Based on the Financial Statements/Management Accounts and other information available on the latest financial year-end of _____ (**DD/MM/YYYY**), the annual Total Revenue was between R10,000,000.00 (Ten Million Rands) and R50,000,000.00 (Fifty Million Rands),
- Please confirm on the table below the B-BBEE level contributor, **by ticking the applicable box.**

100% Black Owned	**Level One** (135% B-BBEE procurement recognition level)	
At Least 51% black owned	**Level Two** (125% B-BBEE procurement recognition level)	

4. I know and understand the contents of this affidavit and I have no objection to take the prescribed oath and consider the oath binding on my conscience and on the owners of the enterprise which I represent in this matter.

5. The sworn affidavit will be valid for a period of 12 months from the date signed by commissioner.

Deponent Signature: _____
Date: _____

_____
Commissioner of Oaths
Signature & stamp

SWORN AFFIDAVIT – B-BBEE EXEMPTED MICRO ENTERPRISE - GENERAL

I, the undersigned,

Full name & Surname	
Identity number	

Hereby declare under oath as follows:

1. The contents of this statement are to the best of my knowledge a true reflection of the facts.

2. I am a Member / Director / Owner of the following enterprise and am duly authorised to act on its behalf:

Enterprise Name:	
Trading Name (If Applicable):	
Registration Number:	
Enterprise Physical Address:	
Type of Entity (CC, (Pty) Ltd, Sole Prop etc.):	
Nature of Business:	
Definition of "Black People"	As per the Broad-Based Black Economic Empowerment Act 53 of 2003 as Amended by Act No 46 of 2013 "Black People" is a generic term which means Africans, Coloureds and Indians – (a) Who are citizens of the Republic of South Africa by birth or descent; or (b) Who became citizens of the Republic of South Africa by naturalization- i. Before 27 April 1994; or ii. On or after 27 April 1994 and who would have been entitled to acquire citizenship by naturalization prior to that date
Definition of "Black Designated Groups"	"Black Designated Groups means: (a) Unemployed black people not attending and not required by the law to attend an educational institution and not awaiting admission to an educational institution; (b) Black people who are youth as defined in the National Youth Commission Act of 1996; (c) Black people who are persons with disabilities as defined in the Code of Good Practice on employment of people with disabilities issued under the Employment Equity Act; (d) Black people living in rural and under developed arears; (e) Black military veterans who qualifies to be called a military veteran in terms of the Military Veterans Act 18 of 2011;"

3. I hereby declare under Oath that:

- The Enterprise is _____% Black Owned as per Amended Code Series 100 of the Amended Codes of Good Practice issued under section 9 (1) of B-BBEE Act No 53 of 2003 as Amended by Act No 46 of 2013,
- The Enterprise is _____% Black Female Owned as per Amended Code Series 100 of the Amended Codes of Good Practice issued under section 9 (1) of B-BBEE Act No 53 of 2003 as Amended by Act No 46 of 2013,

- The Enterprise is _____% Black Designated Group Owned as per Amended Code Series 100 of the Amended Codes of Good Practice issued under section 9 (1) of B-BBEE Act No 53 of 2003 as Amended by Act No 46 of 2013,

- Black Designated Group Owned % Breakdown as per the definition stated above;

    - Black Youth % = _____%
    - Black Disabled % = _____%
    - Black Unemployed % = _____%
    - Black People living in Rural areas % = _____%
    - Black Military Veterans % = _____%

- Based on the Financial Statements/Management Accounts and other information available on the latest financial year-end of _____(**DD/MM/YYYY**) the annual Total Revenue was R10,000,000.00 (Ten Million Rands) or less
- Please confirm on the table below the B-BBEE level contributor, **by ticking the applicable box.**

100% Black Owned	**Level One** (135% B-BBEE procurement recognition level)	
At Least 51% black owned	**Level Two** (125% B-BBEE procurement recognition level)	
Less than 51% Black Owned	**Level Four** (100% B-BBEE procurement recognition level)	

4. I know and understand the contents of this affidavit and I have no objection to take the prescribed oath and consider the oath binding on my conscience and on the owners of the enterprise which I represent in this matter.

5. The sworn affidavit will be valid for a period of 12 months from the date signed by commissioner.

Deponent Signature: _____
Date: _____

_____
Commissioner of Oaths
Signature & stamp

T2.9 Record of Addenda to tender documents

We confirm that the following communications received from The Department of Public Works & Infrastructure before the submission of this tender offer, amending the tender documents, have been taken into account in this tender offer: Addenda to be attached with tender documents is compulsory.

	Date	Title or Details
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

Attach additional pages if more space is required.

Signed ---------- Date ----------

Name ---------- Position ----------

Enterprise name ----------

T2.10 Proposed Amendments and Qualifications

Project title:	**EXPLORATION AND INSTALLATION OF BOREHOLE AND BACKUP TANK FOR WHITTLESEA DEPOT**
Project Number:	**CHR5-22/23-0015.**

The Tenderer should record any deviations or qualifications he may wish to make to the tender documents in this Returnable Schedule. Alternatively, a tenderer may state such deviations and qualifications in a covering letter to his tender and reference such letter in this schedule.

The Tenderer's attention is drawn to clause 5.8 of SANS 10845-3 regarding the employer's handling of material deviations and qualifications.

Page	Clause /Item	Proposal
The undersigned, who warrants that she/ he is duly authorised to do so on behalf of the enterprise, confirms that the content of this schedule that presented by the tenderer are within my personal knowledge and are to the best of my knowledge both true and correct		

SIGNATURE **DATE**

FULL NAME **POSITION**

ENTERPRISE NAME

T2.11 Resolution of Board of Directors

A: CERTIFICATE OF AUTHORITY FOR SIGNATORY

Signatory for companies shall confirm their authority hereto by attaching a duly signed and dated copy of the relevant resolution of the board of directors to this form.

An example is given below:

"By resolution of the board of directors passed at a meeting held on _____

Mr/Ms_____, whose signature appears below, has been duly authorised to sign all documents in connection with the tender for

Contract No. _____

and any Contract which may arise there from on behalf of (Block Capitals) .

_____

_____

SIGNED ON BEHALF OF THE COMPANY: _____

IN HIS/HER CAPACITY AS: _____

DATE:_____

SIGNATURE OF SIGNATORY: _____

WITNESSES:

1._____ SIGNATURE: _____

IMPORTANT NOTICE: RESOLUTION TO SIGN

1. In the event that a resolution to sign is not completed by all directors/ shareholders of the enterprise, the signature of any one of the director or shareholder to this quotation will bind all the directors/ shareholders of the enterprise and will therefore render the quotation valid.
2. In the event that a non-shareholder/ non-director to the enterprise sign this declaration, and no authority is granted, it will automatically invalidate the quotation.
3. In the case of a joint venture or consortium, at least one director/ shareholder of each of the parties need to sign the joint venture or consortium agreement.
4. Furthermore, in the case of a joint venture or consortium at least one director/ shareholder of each party to the joint venture or consortium must give consent to give authorisation for signatory to this bid.

DECLARATION

I, THE UNDERSIGNED NAME)……

CERTIFY THAT THE INFORMATION FURNISHED IN PARAGRAPHS 2.1 TO 2.3.1 ABOVE IS CORRECT.

I ACCEPT THAT THE PRINCIPAL MAY ACT AGAINST ME IN TERMS OF PARAGRAPH 23 OF THE GENERAL CONDITIONS OF CONTRACT SHOULD THIS DECLARATION PROVE TO BE FALSE.

…….. ……..
Signature Date

…….. ……
Position Name of bidder

T2.12 Certificate of Authority for Joint

This Returnable Schedule is to be completed by joint ventures.

We, the undersigned, are submitting this tender offer in Joint Venture and hereby authorise Mr/Ms ..... authorised signatory of the company ……, acting in the capacity of lead partner, to sign all documents in connection with the tender offer and any contract resulting from it on our behalf.

PROJECT TITLE	EXPLORATION AND INSTALLATION OF BOREHOLE AND BACKUP TANK FOR WHITTLESEA DEPOT
SCMU NUMBER	**CHR5-22/23-0015.**

NAME OF FIRM	ADDRESS	DULY AUTHORISED SIGNATORY
Lead partner: ……		Signature. . …… Name …… Designation……
……		Signature. . …… Name …… Designation……
……		Signature. . …… Name …… Designation……
……		Signature. . …… Name …… Designation……
……		Signature. . …… Name …… Designation……

T2.13: Schedule of Proposed Subcontractors

Project title:	**EXPLORATION AND INSTALLATION OF BOREHOLE AND BACKUP TANK FOR WHITTLESEA DEPOT**
Project Number:	**CHR5-22/23-0015.**

We notify you that it is our intention to employ the following Subcontractors for work in this contract.

If we are awarded a contract we agree that this notification does not change the requirement for us to submit the names of proposed Subcontractors in accordance with requirements in the contract for such appointments. If there are no such requirements in the contract, then your written acceptance of this list shall be binding between us.

We confirm that all subcontractors who are contracted to construct a house are registered as home builders with the National Home Builders Registration Council.

	Name and address of proposed Subcontractor	Nature and extent of work	Previous experience with Subcontractor.
1.			
2.			
3.			
4.			
5.			

Signed ..... Date .....

Name ..... Position .....

Tenderer .....

T2.14 Capacity of Bidder

PROJECT TITLE	**EXPLORATION AND INSTALLATION OF BOREHOLE AND BACKUP TANK FOR WHITTLESEA DEPOT**
SCMU NUMBER	**CHR5-22/23-0015.**

WORK CAPACITY: (The Bidder is requested to furnish the following capacity particulars and to attach additional pages if more space is required. Failure to furnish the particulars may result in the Bid being disregarded.)

Artisans and Employees: (Artisans and Employees to be ,or are ,employed for this project)

Quantity / No. of minimum Resources	**Categories of Employee - Key Personnel (part of Business Enterprise)**	**Compliance and Professional Registration.**	**Date of Employment**

The undersigned, who warrants that she/ he is duly authorised to do so on behalf of the enterprise, confirms that the content of this schedule that presented by the tenderer are within my personal knowledge and are to the best of my knowledge both true and correct.

Signed:	……	**Date**	……
Name:	……	**Position**	……

Enterprise Name: ……

T2.15 Relevant Project Experience – Completed Projects

Tenderers must submit a max one-page description of at least three projects successfully completed.

NOTE: Attach a Completion Certificate for each of the project provided.

The description of each project must include the following information:

1. Essential introductory information:

    1.1. Name of project.
    1.2. Name of client.
    1.3. Contact details of client.
    1.4. Contact details (including telephone numbers and email addresses) of currently contactable references.
    1.5. The period during which the project was performed, and also, if this is different, the period during which the tenderer's team members were contracted.
    1.6. Cost of works and/or contract value (making it clear in broad terms what this cost/value purchased, and to what extent (if any) this cost/value was part of a larger project budget or programme budget).

NO.	NAME OF PROJECT.	NAME OF CLIENT.	CONTACT DETAILS OF CLIENT.	PROJECT VALUE	DATE COMPLETED
1					
2					
3					
4					

Attach a separate page to address this issue if there are more projects (the above table is just for reference purposes).

The undersigned, who warrants that she/ he is duly authorised to do so on behalf of the enterprise, confirms that the content of this schedule that presented by the tenderer are within my personal knowledge and are to the best of my knowledge both true and correct.

Signed:_____ Date: _____

Name:_____ Position:_____

Enterprise Name: _____

T2.16 Relevant Project Experience – Current Projects

Project title:	**EXPLORATION AND INSTALLATION OF BOREHOLE AND BACKUP TANK FOR WHITTLESEA DEPOT**
Project Number:	**CHR5-22/23-0015.**

Tenderers must submit a max one-page description of at least three projects successfully completed.

NOTE: Attach a Completion Certificate for each of the project provided.

The description of each project must include the following information:

1. Essential introductory information:

   1.1. Name of project.
   1.2. Name of client.
   1.3. Contact details of client.
   1.4. Contact details (including telephone numbers and email addresses) of currently contactable references.
   1.5. The period during which the project was performed, and also, if this is different, the period during which the tenderer's team members were contracted.
   1.6. Cost of works and/or contract value (making it clear in broad terms what this cost/value purchased, and to what extent (if any) this cost/value was part of a larger project budget or programme budget).

NO.	NAME OF PROJECT.	NAME OF CLIENT.	CONTACT DETAILS OF CLIENT.	PROJECT VALUE	STAGE OF PROJECT
1					
2					
3					
4					

Attach a separate page to address this issue if there are more projects (the above table is just for reference purposes).

The undersigned, who warrants that she/ he is duly authorised to do so on behalf of the enterprise, confirms that the content of this schedule that presented by the tenderer are within my personal knowledge and are to the best of my knowledge both true and correct.

Signed:_____ Date: _____

Name:_____ Position:_____

Enterprise Name: _____

T2.17 Other offers Submitted at Time of This Tender for Which Results are Pending.

Project title:	**EXPLORATION AND INSTALLATION OF BOREHOLE AND BACKUP TANK FOR WHITTLESEA DEPOT**
Project Number:	**CHR5-22/23-0015.**

NOTE: Any other client's tender must also be included.

The description of each project must include the following information:

1. Essential introductory information:

    1.1. Name of project.
    1.2. Name of client.
    1.3. Contact details of client.
    1.4. Contact details (including telephone numbers and email addresses) of currently contactable references.
    1.5. The date during which the project was submitted.
    1.6. Value of works and/or contract value.

NO.	NAME OF PROJECT.	NAME OF CLIENT.	CONTACT DETAILS OF CLIENT.	PROJECT VALUE	DATE SUBMITTED
1					
2					
3					
4					

Attach a separate page to address this issue if there are more projects (the above table is just for reference purposes).

The undersigned, who warrants that she/ he is duly authorised to do so on behalf of the enterprise, confirms that the content of this schedule that presented by the tenderer are within my personal knowledge and are to the best of my knowledge both true and correct.

Signed:_____ Date: _____

Name:_____ Position:_____

Enterprise Name: _____

T2.18 Schedule of Tenderer's Litigation History.

Project title:	**EXPLORATION AND INSTALLATION OF BOREHOLE AND BACKUP TANK FOR WHITTLESEA DEPOT**
Project Number:	**CHR5-22/23-0015.**

The tenderer shall list below details of any litigation with which the tenderer (including its directors, shareholders or other senior members in previous companies) has been involved with any organ of state or state department within the last ten years. The details must include the year, the litigating parties, the subject matter of the dispute, the value of any award or estimated award if the litigation is current and in whose favour the award, if any, was made

NO.	NAME OF CLIENT.	OTHER LITIGATING PARTY	BRIEF DETAILS OF DISPUTE	PROJECT VALUE	DATE RESOLVED OR STATUS OF LITIGATION
1					
2					
3					
4					

Attach a separate page to address this issue if there are more projects (the above table is just for reference purposes).

The undersigned, who warrants that she/ he is duly authorised to do so on behalf of the enterprise, confirms that the content of this schedule that presented by the tenderer are within my personal knowledge and are to the best of my knowledge both true and correct.

Signed:_____ Date: _____

Name:_____ Position:_____

Enterprise Name: _____

T2.19 Evaluation Schedule 1 – Project Reference Form

Project title:	**EXPLORATION AND INSTALLATION OF BOREHOLE AND BACKUP TANK FOR WHITTLESEA DEPOT**
Project Number:	**CHR5-22/23-0015.**

NOTE: This returnable document must be completed by the person who was the Engineer/Project Manager on a project of similar value and complexity that was completed successfully by the tenderer.

I,_____(name and surname) of

_____(company name) declare that I

was the Project Manager on the following building construction project successfully executed by _____(name of tenderer):

Project name: _____ _____

Project location: _____ _____

Construction period: _____Completion date: _____

Contract value: _____

A. Please evaluate the performance of the Tenderer on the abovementioned project, on which you were the principal agent, by inserting "Yes" in the relevant box below:

Key Performance Indicators	Very Poor 1	Poor 2	Fair 3	Good 4	Excellent 5	Total
1. Project performance/time management/programming						
2. Quality of workmanship						
3. Resources: Personnel						
4. Resources: Plant						
5. Financial management / payment of subcontractors / cash flow, etc						
TOTAL						

B. Would you consider / recommend this tenderer again:

YES	NO

C. Any other comments:

_____

_____

D. My contact details are:

Telephone :_____Cellphone :_____

Fax :_____

E-mail :_____

Thus signed at _____on this_____day of_____ 2022

_____
Signature of principal agent

COMPANY STAMP

NOTE:

If reference cannot be verified due to the inability to get hold of the referee or failure on his/her part to respond to a written request to do so, that reference will not score any points. It is the responsibility of the tenderer to put referees who are reachable.

_____
Name of Tenderer

_____ _____
Signature of Tenderer Date

Evaluation Schedule 2 – Project Reference Form

Project title:	**EXPLORATION AND INSTALLATION OF BOREHOLE AND BACKUP TANK FOR WHITTLESEA DEPOT**
Project Number:	**CHR5-22/23-0015.**

NOTE: This returnable document must be completed by the person who was the Engineer/Project Manager on a project of similar value and complexity that was completed successfully by the tenderer.

I,_____(name and surname) of

_____(company name) declare that I

was the Project Manager on the following building construction project successfully executed by _____(name of tenderer):

Project name: _____ _____

Project location: _____ _____

Construction period: _____Completion date: _____

Contract value: _____

A. Please evaluate the performance of the Tenderer on the abovementioned project, on which you were the principal agent, by inserting "Yes" in the relevant box below:

Key Performance Indicators	**Very Poor 1**	**Poor 2**	**Fair 3**	**Good 4**	**Excellent 5**	**Total**
1. Project performance/time management/programming						
2. Quality of workmanship						
3. Resources: Personnel						
4. Resources: Plant						
5. Financial management / payment of subcontractors / cash flow, etc						
TOTAL						

B. Would you consider / recommend this tenderer again:

YES	NO

C. Any other comments:

_____

_____

D. My contact details are:

Telephone :_____Cellphone :_____

Fax :_____

E-mail :_____

Thus signed at _____on this_____day of_____ 2022

_____
Signature of principal agent

COMPANY STAMP

NOTE:

If reference cannot be verified due to the inability to get hold of the referee or failure on his/her part to respond to a written request to do so, that reference will not score any points. It is the responsibility of the tenderer to put referees who are reachable.

_____
Name of Tenderer

_____ _____
Signature of Tenderer Date

Evaluation Schedule 3 – Project Reference Form

Project title:	**EXPLORATION AND INSTALLATION OF BOREHOLE AND BACKUP TANK FOR WHITTLESEA DEPOT**
Project Number:	**CHR5-22/23-0015.**

NOTE: This returnable document must be completed by the person who was the Engineer/Project Manager on a project of similar value and complexity that was completed successfully by the tenderer.

I,_____(name and surname) of

_____(company name) declare that I

was the Project Manager on the following building construction project successfully executed by _____(name of tenderer):

Project name: _____ _____

Project location: _____ _____

Construction period: _____Completion date: _____

Contract value: _____

A. Please evaluate the performance of the Tenderer on the abovementioned project, on which you were the principal agent, by inserting "Yes" in the relevant box below:

Key Performance Indicators	Very Poor 1	Poor 2	Fair 3	Good 4	Excellent 5	Total
1. Project performance/time management/programming						
2. Quality of workmanship						
3. Resources: Personnel						
4. Resources: Plant						
5. Financial management / payment of subcontractors / cash flow, etc						
TOTAL						

B. Would you consider / recommend this tenderer again:

YES	NO

C. Any other comments:

_____

_____

D. My contact details are:

Telephone :_____Cellphone :_____

Fax :_____

E-mail :_____

Thus signed at _____on this_____day of_____ 2022

_____
Signature of principal agent

COMPANY STAMP

NOTE:

If reference cannot be verified due to the inability to get hold of the referee or failure on his/her part to respond to a written request to do so, that reference will not score any points. It is the responsibility of the tenderer to put referees who are reachable.

_____
Name of Tenderer

_____ _____
Signature of Tenderer Date

Evaluation Schedule 4 – Project Reference Form

Project title:	**EXPLORATION AND INSTALLATION OF BOREHOLE AND BACKUP TANK FOR WHITTLESEA DEPOT**
Project Number:	**CHR5-22/23-0015.**

NOTE: This returnable document must be completed by the person who was the Engineer/Project Manager on a project of similar value and complexity that was completed successfully by the tenderer.

I,_____(name and surname) of

_____(company name) declare that I

was the Project Manager on the following building construction project successfully executed by _____(name of tenderer):

Project name: _____ _____

Project location: _____ _____

Construction period: _____Completion date: _____

Contract value: _____

A. Please evaluate the performance of the Tenderer on the abovementioned project, on which you were the principal agent, by inserting "Yes" in the relevant box below:

Key Performance Indicators	Very Poor 1	Poor 2	Fair 3	Good 4	Excellent 5	Total
1. Project performance/time management/programming						
2. Quality of workmanship						
3. Resources: Personnel						
4. Resources: Plant						
5. Financial management / payment of subcontractors / cash flow, etc						
TOTAL						

B. Would you consider / recommend this tenderer again:

YES	NO

C. Any other comments:

_____

_____

D. My contact details are:

Telephone :_____Cellphone :_____

Fax :_____

E-mail :_____

Thus signed at _____on this_____day of_____ 2022

_____
Signature of principal agent

COMPANY STAMP

NOTE:

If reference cannot be verified due to the inability to get hold of the referee or failure on his/her part to respond to a written request to do so, that reference will not score any points. It is the responsibility of the tenderer to put referees who are reachable.

_____
Name of Tenderer

_____ _____
Signature of Tenderer Date

Evaluation Schedule 5 – Project Reference Form

Project title:	**EXPLORATION AND INSTALLATION OF BOREHOLE AND BACKUP TANK FOR WHITTLESEA DEPOT**
Project Number:	**CHR5-22/23-0015.**

NOTE: This returnable document must be completed by the person who was the Engineer/Project Manager on a project of similar value and complexity that was completed successfully by the tenderer.

I,_____(name and surname) of

_____(company name) declare that I

was the Project Manager on the following building construction project successfully executed by _____(name of tenderer):

Project name: _____ _____

Project location: _____ _____

Construction period: _____Completion date: _____

Contract value: _____

A. Please evaluate the performance of the Tenderer on the abovementioned project, on which you were the principal agent, by inserting "Yes" in the relevant box below:

Key Performance Indicators	**Very Poor 1**	**Poor 2**	**Fair 3**	**Good 4**	**Excellent 5**	**Total**
1. Project performance/time management/programming						
2. Quality of workmanship						
3. Resources: Personnel						
4. Resources: Plant						
5. Financial management / payment of subcontractors / cash flow, etc						
TOTAL						

B. Would you consider / recommend this tenderer again:

YES	NO

C. Any other comments:

_____

_____

D. My contact details are:

Telephone :_____Cellphone :_____

Fax :_____

E-mail :_____

Thus signed at _____on this_____day of_____ 2022

_____
Signature of principal agent

COMPANY STAMP

NOTE:

If reference cannot be verified due to the inability to get hold of the referee or failure on his/her part to respond to a written request to do so, that reference will not score any points. It is the responsibility of the tenderer to put referees who are reachable.

_____
Name of Tenderer

_____ _____
Signature of Tenderer Date

T2.20 Eastern Cape Infrastructure Input Material

Project title:	**EXPLORATION AND INSTALLATION OF BOREHOLE AND BACKUP TANK FOR WHITTLESEA DEPOT.**
Tender No:	**CHR5-22/23-0015**

1. Below is the list of building material which must be sourced from Eastern Cape based suppliers, manufacturers or accredited agents.
2. On monthly basis, the contractor will report the purchasing of any of this material.
3. The report will then be communicated to PT & OTP on quarterly basis or in whichever intervals, as prescribed by PT & OTP.

B. BUILDING MATERIAL LISTS– BUILDING RELATED STRUCTURES (NEW, REFURBISHMENTS & RENOVATIONS)

ITEM	BUILDING MATERIAL (Type)	Qty	ESTIMATE AMOUNT (Rands)
1	Aluminium doors and windows,		
2	Wooden doors,		
3	Windows and frames,		
4	Burglar-proofing,		
5	Bricks (all kinds),		
7	Lintels (precast concrete),		
8	Paving blocks and bricks,		
9	Precast concrete kerbs,		
10	Tar products,		
11	Aluminium Shop Fronts (certain elements),		
12	Vinyl flooring,		
13	Ceramic tiles,		
14	Air conditioning units (some products),		
15	Fire Detection system,		
16	Dust Extraction products (some products),		
17	PVC Tanks,		

18	Fencing (certain products),		
19	Fencing Poles (all products),		
20	Roof Structure (timber and certain steel structures),		
21	Roof Covering (most roof products),		
22	Painting (for all purposes),		
23	Ceiling (most products),		
24	Partitioning (certain products),		
25	Branderings all products),		
26	Purlins (all products),		
27	Landscaping products (most products),		
28	Waterproofing products (some products),		
29	Rainwater goods (some products),		
30	Skirting (most products),		
31	Cornices (most products),		
32	Blinds (most products),		
33	Aluminium gutters and accessories (most products).		
TOTAL			

C. CONFIRMATION

1. I _____ (***Contractor name***) acknowledge and confirm the above mentioned material will be sourced in the Eastern Cape Province, from Eastern Cape based material suppliers and manufacturers.
2. I confirm that on monthly basis I will produce a proof of purchase of this material used or to be used, either in the form of delivery notes, tax invoices or any formal document which verifies that the material or goods were sourced from an Eastern Cape based supplier or manufacturer.

_____ _____ _____

Representative of the Contractor (Name) **Signature** **Date**

T2.21 Company Details

Project title:	**EXPLORATION AND INSTALLATION OF BOREHOLE AND BACKUP TANK FOR WHITTLESEA DEPOT**
Project Number:	**CHR5-22/23-0015.**

The following company details schedule must be completed to ensure that the prerequisite requirements to bidding are met.

Registered Company Name: .....

.....

.....

.....

Company Registration Number: .....

VAT Number: .....

Bank Name and Branch: .....

Bank Account Number: .....

Last Financial Year End: Year……..Month……..Day…….

Professional Registration Details (if applicable): .....

Professional Indemnity Details (if applicable): .....

T2.22 Company Composition

Project title:	**EXPLORATION AND INSTALLATION OF BOREHOLE AND BACKUP TANK FOR WHITTLESEA DEPOT**
Project Number:	**CHR5-22/23-0015.**

All information must be filled in spaces provided. If additional space is required, additional sheets may be attached. The onus is on the bidder to fill in all the information. The full company composition is required including HDI and Non-HDI status. The ownership must accumulate to 100%.

NAME	IDENTITY NUMBER	CITIZENSHIP	HISTORICALLY DISADVANTAGED INDIVIDUALS STATUS (Y/N)	DISABILITY	FEMALE	DATE OF OWNERSHIP	% OWNED	VOTING %

Please note: This information is for statistical purposes

T2.23 Declaration (Validity of Information Provided)

Project title:	**EXPLORATION AND INSTALLATION OF BOREHOLE AND BACKUP TANK FOR WHITTLESEA DEPOT**
Project Number:	**CHR5-22/23-0015.**

I,_____ *(full names)* declare that the information provided is true and correct, the signature to the bid document is duly authorised and documentary proof regarding any bidding issue will, when required, be submitted to the satisfaction of the Eastern Cape, Department of Public Works & Infrastructure.

_____ _/__/20__

SIGNATURE OF DECLARER **DATE**

_____ _____

POSITION OF DECLARER **NAME OF COMPANY**

Should the bidder have, in the opinion of the department, acted fraudulently, illegally, in bad faith or in any improper manner, misrepresented itself with regards to the bid, then the department may in its discretion:

(i) Ignore any bid without advising the bidder thereof
(ii) Cancel the contract without prejudice to any legal rights the department may have.

Should the bidder disregard this or conduct affairs in a way that transgresses good business practices in accordance with the South African Laws, Policies and Standards, will be added to National Treasury's list of defaulters in accordance with relevant laws.

PART C1: AGREEMENTS AND CONTRACT DATA

C1.1 **Form of Offer and Acceptance**

C1.2 **Contract Data**

C1.3 **General Conditions of Contract**

C1.4 **Form of Guarantee**

C1.5 **Agreement in Terms of the Occupational Health and Safety Act, 1993 (Act 85 of 1993)**

C1.1 Form of offer and acceptance

Note: *1 This form of offer and acceptance is identical to that contained in Annex G of SANS 294:2004, Construction Procurement Processes, Procedures and Methods.*

2 SAICE's Practice Manual #1, The use of South African National Standards in Construction Procurement, provides guidance on the formulation of the wording for the actual offer where it is not based on the offered total of prices.

Offer

The employer, identified in the acceptance signature block, has solicited offers to enter into a contract for the procurement of:

CHR5-22/23-0015: EXPLORATION AND INSTALLATION OF BOREHOLE AND BACKUP TANK FOR WHITTLESEA DEPOT.

The tenderer, identified in the offer signature block, has examined the documents listed in the tender data and addenda thereto as listed in the returnable schedules, and by submitting this offer has accepted the conditions of tender.

By the representative of the tenderer, deemed to be duly authorized, signing this part of this form of offer and acceptance, the tenderer offers to perform all of the obligations and liabilities of the contractor under the contract including compliance with all its terms and conditions according to their true intent and meaning for an amount to be determined in accordance with the conditions of contract identified in the contract data.

THE OFFERED TOTAL OF THE PRICES INCLUSIVE OF VALUE ADDED TAX IS

……

……

Rand (in words); R ……(in figures) (or other suitable wording)

This offer may be accepted by the employer by signing the acceptance part of this form of offer and acceptance and returning one copy of this document to the tenderer before the end of the period of validity stated in the tender data, whereupon the tenderer becomes the party named as the contractor in the conditions of contract identified in the contract data.

Signature(s) _____ _____

Name(s) _____ _____

Capacity _____ _____

for the tenderer _____
(Name and address of organization)

Name and signature of witness _____ Date_____

Acceptance

By signing this part of this form of offer and acceptance, the employer identified below accepts the tenderer's offer. In consideration thereof, the employer shall pay the contractor the amount due in accordance with the conditions of contract identified in the contract data. Acceptance of the tenderer's offer shall form an agreement between the employer and the tenderer upon the terms and conditions contained in this agreement and in the contract that is the subject of this agreement.

The terms of the contract, are contained in:

Part C1 Agreements and contract data, (which includes this agreement) Part

C2 Pricing data

Part C3 Scope of work.

Part C4 Site information

and drawings and documents or parts thereof, which may be incorporated by reference into the above listed Parts.

Deviations from and amendments to the documents listed in the tender data and any addenda thereto as listed in the returnable schedules as well as any changes to the terms of the offer agreed by the tenderer and the employer during this process of offer and acceptance, are contained in the schedule of deviations attached to and forming part of this form of offer and acceptance. No amendments to or deviations from said documents are valid unless contained in this schedule.

The tenderer shall within two weeks after receiving a completed copy of this agreement, including the schedule of deviations (if any), contact the employer's agent (whose details are given in the contract data) to arrange the delivery of any securities, bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the conditions of contract identified in the contract data. Failure to fulfil any of these obligations in accordance with those terms shall constitute a repudiation of this agreement.

Notwithstanding anything contained herein, this agreement comes into effect on the date when the tenderer receives one fully completed original copy of this document, including the schedule of deviations (if any). Unless the tenderer (now contractor**)** within five working days of the date of such receipt notifies the employer in writing of any reason why he cannot accept the contents of this agreement, this agreement shall constitute a binding contract between the parties. [1]

Signature(s) _____ _____

Name(s) _____ _____

Capacity _____ _____

for the Employer **Eastern Cape Department of Public Works & Infrastructure**
No. 1 Creamery Road
Kings Park
Komani
5320

Name and signature of witness _____ Date _____

[1] *As an alternative, the following wording may be used:*
Notwithstanding anything contained herein, this agreement comes into effect two working days after the submission by the employer of one fully completed original copy of this document including the schedule of deviations (if any), to a courier-to- counter delivery / counter-to-counter delivery / door-to-counter delivery /door-to-door delivery /courier service (delete that which is not applicable), provided that the employer notifies the tenderer of the tracking number within 24 hours of such submission. Unless the tenderer (now contractor) within seven working days of the date of such submission notifies the employer in writing of any reason why he cannot accept the contents of this agreement, this agreement shall constitute a binding contract between the parties.

Schedule of Deviations

Notes:

1. *The extent of deviations from the tender documents issued by the employer before the tender closing date is limited to those permitted in terms of the conditions of tender.*
2. *A tenderer's covering letter shall not be included in the final contract document. Should any matter in such letter, which constitutes a deviation as aforesaid, become the subject of agreements reached during the process of offer and acceptance, the outcome of such agreement shall be recorded here.*
3. *Any other matter arising from the process of offer and acceptance either as a confirmation, clarification or change to the tender documents and which it is agreed by the Parties becomes an obligation of the contract shall also be recorded here.*
4. *Any change or addition to the tender documents arising from the above agreements and recorded here, shall also be incorporated into the final draft of the Contract.*

1 Subject _____

Details _____

2 Subject _____

Details _____

3 Subject _____

Details _____

4 Subject _____

Details _____

5 Subject _____

Details _____

6 Subject _____

Details _____

7 Subject _____

Details _____

By the duly authorised representatives signing this agreement, the employer and the tenderer agree to and accept the foregoing schedule of deviations as the only deviations from and amendments to the documents listed in the tender data and addenda thereto as listed in the returnable schedules, as well
as any confirmation, clarification or changes to the terms of the offer agreed by the tenderer and the employer during this process of offer and acceptance.

It is expressly agreed that no other matter whether in writing, oral communication or

implied during the period between the issue of the tender documents and the receipt by the tenderer of a completed signed copy of this Agreement shall have any meaning or effect in the contract between the parties
arising from this agreement.

C1.2 Contract Data

Project title:	**EXPLORATION AND INSTALLATION OF BOREHOLE AND BACKUP TANK FOR WHITTLESEA DEPOT.**
Tender No:	**CHR5-22/23-0015**

	PART 1: DATA PROVIDED BY THE EMPLOYER
	CONDITIONS OF CONTRACT
	The General Conditions of Contract for Construction Works, Second Edition, 2010, published by the South African Institution of Civil Engineering, Private Bag X200, Halfway House, 1685, is applicable to this Contract and is obtainable from www.saice.org.za

CONTRACT SPECIFIC DATA	
The following contract specific data, referring to the General Conditions of Contract for Construction Works, Second Edition, 2010, are applicable to this Contract:	
CLAUSES	**COMPULSORY DATA**
1.1.1.8	Amend Clause 1.1.1.8 to include the word “rights” to read as follows: “Contract Data” means the specific data which, together with these General Conditions of Contract, collectively describe the rights, risks, liabilities and obligations of the contracting parties and the procedures for the administration of the Contract.
1.1.1.13	Amend Clause 1.1.1.13 as follows, clarify when the defects liability period starts: “Defects Liability Period” means the period stated in the Contract Data, commencing on the date indicated on the Certificate of Completion or Certificates of Completion in the event of more than one Certificate of Completion is issued for different parts of the Works, during which the Contractor has both the right and the obligation to make good defects in the materials, Plant and workmanship covered by the Contract.

	Defects liability period is: **12 months.**
1.1.1.14 & 5.14.7	The time for achieving Practical Completion of the whole of the works is: **2 Months** measured from the Commencement Date. The time thus stated includes special non-working days and the year-end break.

1.1.1.14 & 5.14.7	**or, if Practical Completion in portions is required,** The times for achieving Practical Completion for the portions as set out in the Scope of Works are mutatis mutandi: For portion 1 within **N/A** For portion 2 within **N/A** For portion 3 within **N/A** For portion 4 within **N/A** *(followed by further portions as required)* The time for achieving Practical Completion of the whole of the Works is: **2 Months, measured from the Commencement Date. The time thus stated includes special non-working days and the year-end break.**
1.1.1.15	The name of the Employer is: **The Government of the Republic of South Africa in its Department of Public Works & Infrastructure and Infrastructure.**
1.1.1.16	The name of the Engineer is: **O.L Mpepe**
1.1.1.26	The Pricing Strategy is a: **Re-measurement Contract.**
1.1.1.31	Not applicable to this Contract.
1.1.1.35	Insert the definition of "Value of Works" as Clause 1.1.1.35: "Value of Works" means the value of the Works certified by the Engineer as having been satisfactorily executed and shall include the value of the works done, the value of the materials and/or plant and Contract Price Adjustments.
1.2.1.2	**Employer's address:** Physical Address: No. 1 Creamery Road, Kings Park, Komani, 5320 Postal Address:
	Engineer's address: Physical Address: No. 1 Creamery Road, Kings Park, Komani, 5320 Postal Address:

	Facsimile: N/A Telephone: 072 585 7807
1.3.4	Not applicable to this Contract.
1.3.5	Replace Clause 1.3.5 with the following provisions: (a) The Employer will become the owner of the information, documents, advice, recommendation and reports collected, furnished and/or compiled by the Contractor during the course of, and for the purposes of executing this Contract, all of which will be handed over to the Employer on request, but in any event on the termination and/or cancellation of this Contract for whatever reason. The Contractor relinquishes its retention or any other rights thereon to which it may be entitled. (b) The copyright of all documents, recommendations and reports compiled by the Contractor during the course of and for the purposes of finalizing the Works will vest in the Employer, and may not be reproduced or distributed or made available to any person outside the Employer's service, or to any institution in any way, without the prior written consent of the Employer. The Employer shall have the right to use such material for any other purpose without the approval of information or payment to the Contractor. (c) The copyright of all electronic aids, software programmes etc. prepared or developed in terms of the Contract shall vest in the Employer, who shall have the right to use such material for any other purpose without the approval of, information or payment to the Contractor. (d) In case of the Contractor providing documents, electronic aids, software programs or like material to the Employer, the development of which has not been at the expense of the Employer, copyright shall not vest in the Employer. The Contractor shall be required to indicate to which documents, electronic aids, software programs or like material this provision applies. (e) The Contractor hereby indemnifies the Employer against any action, claim, damages or legal cost that may be instituted against the Employer on the grounds of an alleged infringement of any copyright, patents or any other intellectual property right in connection with the Works outlined in this Contract. (f) All information, documents, recommendations, programs and reports collected or compiled must be regarded as confidential and may not be communicated or made available to any person outside the Employer's service and may not be published either during the currency of this Contract or after termination thereof without the prior written consent of the Employer.
3.1.3	The Engineer's authority to act and/or to execute functions or duties or to issue instructions are expressly excluded in respect of the following: Appointment of nominated Sub-contractors – clause 4.4.3; Granting of an extension of time and/or ruling on claims associated with claims for extension of time – clauses 5.12.3, 10.1.5;

	Acceleration of the rate of progress and determination of the cost for payment of such acceleration – clause 5.12.4; Rulings on claims and disputes – clauses 10.1.5, 10.2.3 and 10.3.3; Suspension of the Works – clause 5.11.1; Final Payment Certificate – clause 6.10.6 Issuing of mora notices to the Contractor – clauses 9.1.1, 9.1.2.1 and 9.2.1; Cancellation of the contract between the Employer and Contractor – clauses 9.1.1, 9.1.2.1 and 9.2.1.
	In order to be legally binding and have legal bearing and consequence, any ruling in respect of the above matters (a) to (h) must be on an official document, signed and issued by the Employer to the Contractor. The Contractor must submit claims, demands, notices, notifications, updated particulars and reports in writing, as well as any other supporting documentation pertaining thereto, in respect of any of the above listed matters (a) to (h), to the Engineer within the time periods and in the format(s) as determined in the relevant clauses of the Conditions of Contract. Failing to deliver such to the Engineer timeous and in the correct format will invalidate any claim and the consequences of such failure will mutatis mutandis be as stated in clause 10.1.4. Clauses 6.10.9 and 10.1.5 shall be amended as follows to indicate the limitation on the Engineer's authority in respect thereof: **Clause 6.10.9 – Amend to read as follows:** Within 14 days of the date of final approval as stated in the Final Approval Certificate, the Contractor shall deliver to the Engineer a final statement claiming final settlement of all moneys due to him (save in respect of matters in dispute, in terms of Clauses 10.3 to 10.11, and not yet resolved). The Employer shall within 14 days issue to the Contractor a Final Payment Certificate the amount of which shall be paid to the Contractor within 28 days of the date of such certificate, after which no further payments shall be due to the Contractor (save in respect of matters in dispute, in terms of Clauses 10.3 to 10.11 and not yet resolved). **Clause 10.1.5 – Amend to read as follows:** Unless otherwise provided in the Contract, the Employer shall, within 28 days after the Contractor has delivered his claim in terms of Clause 10.1.1 as read with Clause 10.1.2, deliver to the Contractor his written and adequately reasoned ruling on the claim (referring specifically to this Clause). The amount thereof, if any, allowed by the Employer shall be included to the credit of the Contractor in the next payment certificate. Insert the following under 3.1.3: Provided that, notwithstanding any provisions to the contrary in the Contract, the Employer shall have the right to reverse and, should it deem it necessary, to amend any certificate, instruction, decision or valuation of the Engineer and to issue a new one, and such certificate instruction, decisions or valuations shall for the purposes of the Contract be deemed to be issued by the Engineer, provided that the Contractor shall

	be remunerated in the normal manner for work executed in good faith in terms of an instruction issued by the Engineer and which has subsequently been rescinded.
3..2.2.1	Amend Clause 3.2.2.1 to insert the word “Plant” to read as follows: Observe the execution of the Works, examine and test material, Plant and workmanship, and receive from the Contractor such information as he shall reasonably require.
3.2.3.2	Amend Clause 3.2.3.2 to insert the word “Plant” to reads as follows: Notwithstanding any authority assigned to him in terms of Clauses 3.2.2 and 3.2.4, failure by the Engineer’s Representative to disapprove of any work, workmanship, Plant or materials shall not prejudice the power of the Engineer thereafter to disapprove thereof and exercise any of his powers in terms of the Contract in respect of thereof.
4.8.2.1	Amend Clause 4.8.2.1 to include the word “person”, as follows: Makes available to the Employer, or to any such contractor, person or authority, any roads or ways for the maintenance of which the Contractor is responsible, or
4.8.2.2	Amend Clause 4.8.2.2 to include “Employer” and “contractors”, as follows: Provides any other facility or service of whatsoever nature to the Employer or to any of the said contractors, persons or authorities,
5.3.1	The documentation required before commencement with Works execution are: Health and Safety Plan (Refer to Clause 4.3) Initial programme (Refer to Clause 5.6) Security (Refer to Clause 6.2) Insurance (Refer to Clause 8.6) ***insert other requirements*** ***insert other requirements*** ***insert other requirements***
5.3.2	The time to submit the documentation required before commencement with Works execution is: 21 days.
5.4.2	The access to, and possession of, the Site referred to in Clause 5.4.1 shall be "exclusive to the Contractor. In the event of access to, and possession of, the Site is not exclusive to the Contractor, the following limitations apply: ***Insert an exposition of limitation.***
5.8.1	The non-working days are: Saturdays and Sundays
	The special non-working days are: (1) Public Holidays; (2) The year-end break commencing on 16 December until the Sunday preceding the first working Monday of January of the succeeding year.
5.9.1	Amend Clause 5.9.1 as follows: On the Commencement Date, the Engineer shall deliver to the Contractor three (3) copies, at no cost to the Contractor, of the drawings and any instructions required for the commencement of the Works. The cost of any additional copies of such drawings and/or instructions, as may be required by the Contractor, will be for the account of the Contractor.

5.13.1	The penalty for failing to complete the Works is: **RInsert penalty amount per day**
	or, if completion in portions is required, The penalty for failing to complete portion 1 of the Works is: **RInsert penalty amount per day.** The penalty for failing to complete portion 2 of the Works is: **RInsert penalty amount per day.** The penalty for failing to complete portion 3 of the Works is: **RInsert penalty amount per day.** The penalty for failing to complete portion 4 of the Works is: **RInsert penalty amount per day.** Followed by further portions as required. The penalty for failing to complete the whole of the works is: **RInsert penalty amount per day.**
5.14.1	Amend the second paragraph of Clause 5.14.1 as follows: When the Works are about to reach the said stage, the Contractor shall, in writing, request a Certificate of Practical Completion and the Engineer shall, within 14 days after receiving such request, issue to the Contractor a written list setting out the work to be completed to justify Practical Completion. Should the Engineer not issue such a list within the 14 days, the Contractor shall notify the Employer accordingly. Should the Employer not issue such a list within 7 days of receipt of such notice, Practical Completion shall be deemed to have been achieved on the 14th day after the contractor requested the Certificate of Practical Completion.
5.16.1	Amend Clause 5.16.1 to delete the proviso in the third paragraph of this clause.
5.16.2	Amend Clause 5.16.2 as follows: No certificate other than the Final Approval Certificate referred to in Clause 5.16.1 shall be deemed to constitute approval of the Works or shall be taken as an admission of the due performance of the Contract or any part thereof, nor of the accuracy of any claim made by the Contractor, nor shall any other certificate exclude or prejudice any of the powers of the Engineer and/or the Employer.
5.16.3	The latent defect period for all works is: **5 years**.
6.2.1	The type of security for the due performance of the Contract, as selected by the Contractor in the Contract Data, must be delivered to the Employer.
6.2.3	Amend Clause 6.2.3 as follows: If the Contractor has selected a performance guarantee as security, he shall ensure that it remains valid and enforceable as required in terms of the Contract.

6.5.1.2.3	The percentage allowance to cover overhead charges is: **33%, except on material cost where the percentage allowance is 10%.**
6.8.2	Contract Price Adjustment (CPA) will be applicable: Yes. If CPA is indicated as 'Yes" above the value of payment certificates is to be adjusted by a Contract Price Adjustment Factor: The value of the certificates issued shall be adjusted in accordance with the Contract Price Adjustment Schedule with the following values: The value of "x" is 0.15. The values of the coefficients are: a = 0.25. (Labour) b = 0.3 (Contractor's equipment) c = 0.3 (Material) d = 0.15 (Fuel) The values of the coefficients for "Repair and Maintenance Project" (RAMP) contracts are: a = 0.35 (Labour) b = 0.20 (Contractor's equipment) c = 0.35 (Material) d = 0.10 (Fuel) The urban area nearest the Site is Kimberley. (Select urban area from Statistical News Release, P0141, Table 7.1.) The applicable industry for the Producer Price Index for materials is . (Select the applicable industry from Statistical News Release, P01421, Table 11.) The area for the Producer Price Index for fuel is . (Select the area from Statistical News Release, P01421, Table 12.) The base month is March 2017. (The month prior to the closing of the tender.)
6.8.3	Price adjustments for variations in the costs of special materials are not allowed.
6.10.1.5	The percentage advance on materials not yet built into the Permanent Works is: **85 %**.
6.10.3	The limit of retention money is dependent on the security to be provided by the Contractor in terms of Clause 6.2.1.
6.10.5	Replace Clause 6.10.5 with the following: In respect of contracts up to R2 million and in respect of contracts above R2 million where the Contractor elects a security by means of a 10% retention, 50% of the retention shall be released to the Contractor when the Engineer issues the Certificate of Completion in terms of clause 5.14.4. The remaining 50% of the retention shall be released in accordance with the provisions of the conditions of contract and will become due and payable when the Contractor becomes entitled, in terms of Clause 5.16.1, to receive the Final Approval Certificate. In respect of contracts above R2 million, where the Contractor elects a security by means of a cash deposit or fixed guarantee of 10% of the Contract Sum (excl. VAT) and a 10% retention of the Value of the Works (excl. VAT), the cash deposit or fixed guarantee, whichever is applicable, shall be refunded to the Contractor or return to the guarantor, respectively, when the Engineer issues the Certificate of Completion in terms of Clause 5.14.4. The 10% retention of the Value of the Works (excl. VAT) shall

	become due and payable when the Contractor becomes entitled, in terms of Clause 5.16.1, to receive the Final Approval Certificate. In respect of contracts above R2 million, where the Contractor elects a security by means of a cash deposit or a variable guarantee of 10% of the Contract Sum (excl. VAT), the cash deposit or the variable guarantee, whichever is applicable, will be reduced to 5% of the Value of the Works (excl. VAT) when the Engineer issues the Certificate of Completion in terms of Clause 5.14.4. The balance of the cash deposit shall become due and payable or the variable guarantee shall expire when the Contractor becomes entitled in terms of Clause 5.16.1 to receive the Final Approval Certificate.
7.9.1	Insert the following at the end of Clause 7.9.1: Provided that, should the Contractor on demand not pay the amount of such costs to the Employer, such amount may be determined and deducted by the Employer from any amount due to or that may become due to the Contractor under this or any other previous or subsequent contract between the Contractor and the Employer.
8.2.2.1	Insert the following as a second paragraph to Clause 8.2.2.1: The Contractor shall at all times proceed immediately to remove or dispose of any debris arising from damage to or destruction of the Works and to rebuild, restore, replace and/or repair the Works, failing which the Employer may cause same to be done and recover the reasonable costs associated therewith from the Contractor.
8.4.3	Insert a new Clause 8.4.3 as follows: The Contractor shall on receiving a written instruction from the Engineer immediately proceed at his own cost to remove or dispose of any debris and to rebuild, restore, replace and/or repair such property and to execute the Works.
8.6.1.1.1	Amend Clause 8.6.1.1.1 to read as follows: Contract Sum plus 10%.
8.6.1.1.2	The value of Plant and materials supplied by the Employer to be included in the insurance sum is: **Nil**
8.6.1.1.3	The amount to cover professional fees for repairing damage and loss to be included in the insurance sum is: Nil
8.6.1.5	Amend Clause 8.6.1.3 to delete reference to limit of indemnity, to read as follows: Liability insurance that covers the Contractor against liability for the death of, or injury to any person, or loss of, or damage to any property (other than property while it is insured in terms of Clause 8.6.1.1) arising from or in the course of the fulfillment of the Contract, from the Commencement Date to the date of the end of the Defects Liability Period, if there is one, or otherwise to the issue of the Certificate of Completion.
8.6.1.5	1. **Public liability insurance** to be effect by the Contractor to a minimum value of: ☒ R5 million **or**

	☐ R **insert amount in figures (and in words)** With a deductible not exceeding 5% of each and every claim. 2. Support insurance is to be effected by the Contractor to a minimum value of: R **insert amount in figures (and in words)** With a deductible not exceeding 5% of each and every claim.
8.6.5	Amend Clause 8.6.5 as follows: Save as otherwise provided in the Contract Data, the insurances referred to in Clause 8.6.1 shall be effected with an insurance company registered in the Republic of South Africa. The Contractor shall submit the insurance policy to the Employer for approval, if so requested.
8.6.7	Amend Clause 8.6.7 as follows: If the Contractor fails to effect and keep in force any of the insurances referred to in Clause 8.6.1, the Employer may cancel the Contract in terms of Clause 9.2.
8.6.8	Insert a new Clause 8.6.8 in provide for high risk insurance for projects executed on areas classified as "High Risk Areas". **HIGH RISK INSURANCE** In the event of the project being executed in a geological area classified as a "High Risk Area", that is an area which is subject to highly unstable subsurface conditions that might result in catastrophic ground movement evident by sinkhole or doline formation the following will apply: **1. Damage to the Works** The Contractor shall, from the date of Commencement of the Works until the date of the Certificate of Completion, bear the full risk of and hereby indemnifies and holds harmless the Employer against any damage to and/or destruction of the Works consequent upon a catastrophic ground movement as mentioned above. The Contractor shall take such precautions and security measures and other steps for the protection of the Works as he may deem necessary. When so instructed to do so by the Engineer, the Contractor shall proceed immediately to remove and/or dispose of any debris arising from damage to or destruction of the Works and to rebuild, restore, replace and/or repair the Works, at the Contractor's own costs. **2. Injury to Persons or Loss of or damage to Properties** The Contractor shall be liable for and hereby indemnifies and holds harmless the Employer against any liability, loss, claim or proceeding arising during the Contract Period whether arising in common law or by Statute, consequent upon personal injuries to or the death of any person whomsoever resulting from, arising out of or caused by a catastrophic ground movement as mentioned above. The Contractor shall be liable for and hereby indemnifies the Employer against any and all liability, loss, claim or proceeding consequent upon loss of or damage to any moveable, or immovable or personal property or property contiguous to the Site, whether belonging to or under the control of the Employer or any other body or person whomsoever arising out of or caused by a catastrophic ground movement, as mentioned above, which occurred during the Contract Period.

	3. It is the responsibility of the Contractor to ensure that he has adequate insurance to cover his risk and liability as mentioned in Clauses 8.6.8(1) and 8.6.8 (2) above. Without limiting his obligations in terms of the Contract, the Contractor shall, within 21 days of the Commencement Date and before Commencement of the Works, submit to the Employer proof of such insurance policy, if requested to do so. 4. The Employer shall be entitled to recover any and all losses and/or damages of whatever nature suffered or incurred consequent upon the Contractor's default of his obligations as set out in Clauses 8.6.8 (1), 8.6.8 (2) and 8.6.8 (3). Provided that, should the Contractor on demand not pay the amount of such costs to the Employer, such amount may be determined and deducted by the Employer from any amount due to or that may become due to the Contractor under this or any other existing or subsequent contract between the Contractor and the Employer.
9.1.4	Amend Clause 9.1.4 as follows: In the circumstances referred to in Clauses 9.1.1, 9.1.2 or 9.1.3 (provided that the circumstances in 9.1.3 is not due to the fault of the Contractor, his employees, contractors or agents), and whether or not the Contract is terminated under the provisions of this Clause, the Contractor shall be entitled to payment of any increased cost of or incidental to the execution of the Works which is specifically attributable to, or consequent upon the circumstances defined in Clauses 9.1.1, 9.1.2 or 9.1.3;
9.1.5	Amend Clause 9.1.5 as follows: If the Contract is terminated on any account in terms of this Clause (provided that the circumstances in 9.1.3 is not due to the fault of the Contractor, his employees, contractors or agents) , the Contractor shall be paid by the Employer (insofar as such amounts or items have not already been covered by payments on account made to the Contractor) for all measured work executed prior to the date of termination, the amount (without retention), payable in terms of the Contract and, in addition:
9.1.6	This Clause is not applicable to this Contract.
9.2.1.3.8	Insert a new Clause 9.2.1.3.8 as follows: Has failed to effect and keep in force any of the insurances referred to in Clause 8.6.1,
9.2.4	Insert a new Clause 9.2.4 as follows, to provide for unilateral termination by the Employer: The Employer shall be entitled at any time to unilaterally terminate or cancel this Contract or any part thereof. Save for the following, the Contractor shall not be entitled to claim any other amounts whatsoever in respect of such termination or

	cancellation of this Contract. The Employer shall be obliged to pay the Contractor as damages and/or loss of profit the lesser of: 9.2.4.1 An amount not exceeding 10% of the Contract Sum; 9.2.4.2 10% of the value of incomplete work; or 9.2.4.3 The Contractor's actual damage or loss as determined by the Employer after receipt of evidence substantiating any such damage or loss.
9.3.2.2	Amend Clause 9.3.2.2 as follows to delete the proviso on lien: The ownership of Plant and unused materials brought onto the Site by the Contractor, and for which the Employer has not made any payment, shall revest to the Contractor and he shall, with all reasonable dispatch, remove from the Site such Plant, materials and all Construction Equipment and Temporary Works.
9.3.3	Insert the following at the end of Clause 9.3.3 After cancellation of the Contract by the Contractor, the Contractor, when requested by the Employer to do so, shall not be entitled to refuse to withdraw from the Works on the grounds of any lien or a right of retention or on the grounds of any other right whatsoever.
10.1.3.1	Amend Clause 10.1.3.1 as follows to insert the word "Plant": All facts and circumstances relating to the claims shall be investigated as and when they occur or arise. For this purpose, the Contractor shall deliver to the Engineer, records in a form approved by the Engineer, of all the facts and circumstances which the Contractor considers relevant and wishes to rely upon in support of his claims, including details of all Construction Equipment, labour, Plant and materials relevant to each claim. Such records shall be submitted promptly after the occurrence of the event giving rise to the claim.
10.1.6	Insert a new Clause 10.1.6 as follows: If the Employer fails to give his ruling within the period referred to in Clause 10.1.5 he shall be deemed to have given a ruling dismissing the claim.
10.2.1	Amend Clause 10.2.1 as follows: In respect of any matter arising out of or in connection with the Contract, which is not required to be dealt with in terms of Clause 10.1 or which does not require the decision or ruling of the Employer, the Contractor or the Employer shall have the right to deliver a written dissatisfaction claim to the Engineer. This written claim shall be supported by particulars and substantiated.
10.2.2	Amend Clause 10.2.2 as follows: If, in respect of any matter arising out of or in connection with the Contract, which is not required to be dealt with in terms of Clause 10.1 or which does not require the decision or ruling of the Employer, the Contractor or the Employer fails to submit a claim within 28 days after the cause of dissatisfaction, he shall have no further right to raise any dissatisfaction on such matter.

10.3.2	Amend Clause 10.3.2 as follows to replace “adjudication” with “court”: If either party shall have given notice in compliance with Clause 10.3.1, the dispute shall be referred to court proceedings in terms of Clause 10.8, unless amicable settlement is contemplated.
10.3.3	Replace “Engineer” with “Employer”.
10.4.2	Amend Clause 10.4.2 as follows to provide for submission to court: If the other party rejects the invitation to amicable settlement in writing or does not respond in writing to the invitation with 14 days, or amicable settlement is unsuccessful, either party may submit the dispute to court.
10.4.4	Amend Clause 10.4.4 to delete reference to “adjudication” and “arbitration” to read as follows: Save for reference to any portion of any settlement or decision which has been agreed to be final and binding on the parties, no reference shall be made by or on behalf or either party in any subsequent court proceedings, to any outcome of an amicable settlement, or to the fact that any particular evidence was given, or to any submission, statement or admission made in the course of the amicable settlement.
10.5 10.6 &10.7	The entire provisions of these Clauses are not applicable to this Contract.
10.10.3	Amend Clause 10.10.3 as follows to reword and remove reference to “arbitrator”: The court shall have full power to open up, review and revise any ruling, decision, order, instruction, certificate or valuation of the Engineer and Employer and neither party shall be limited in such proceedings before such court to the evidence or arguments put before the Engineer or Employer for the purpose of obtaining his ruling.
	PART 2: DATA PROVIDED BY THE CONTRACTOR
1.1.1.9	The name of the Contractor is:
1.2.1.2	The address of the Contractor is: Physical Address: Postal Address: Facsimile: Telephone:
6.2.1	The security to be provided by the Contractor shall be one of the following: (a) Cash deposit of 10 % of the Contact Sum (excl. VAT) ☐YES or ☐NO (b) Variable performance guarantee of 10 % of the Contract Sum (excl. VAT) ☒YES or ☐NO **(c)** Retention of 10 % of the value of the Works (excl. VAT) ☐**YES** or ☐**NO** **(d)** Cash deposit of 5 % of the Contract Sum (excl. VAT) plus retention of 5 % of the value of the Works (excl. VAT) ☐**YES** or ☐**NO** **(e)** Performance guarantee of 5 % of the Contract Sum (excl. VAT) plus retention of 5 % of the value of the Works (excl. VAT) ☐**YES** or ☐**NO**

	NB: Guarantees submitted must be issued by either an insurance company duly registered in terms of the Short-Term Insurance Act, 1998 (Act 53 of 1998) or by a bank duly registered in terms of the Banks Act, 1990 (Act 94 of 1990) on the pro-forma referred to above. No alterations or amendments of the wording of the pro-forma will be accepted.

C1.3 General Conditions of Contract

PROJECT TITLE	EXPLORATION AND INSTALLATION OF BOREHOLE AND BACKUP TANK FOR WHITTLESEA DEPOT
SCMU NUMBER	**CHR5-22/23-0015.**

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GENERAL CONDITIONS OF CONTRACT

1. Definitions

The following terms shall be interpreted as indicated:

1.1 "**Closing time**" means the date and hour specified in the bidding documents for the receipt of bids.

1.2 "**Contract**" means the written agreement entered into between the purchaser and the provider, as recorded in the contract form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.

1.3 "**Contract price**" means the price payable to the provider under the contract for the full and proper performance of his contractual obligations.

1.4 "**Corrupt practice**" means the offering, giving, receiving, or soliciting of any thing of the value to influence the action of a public official in the procurement process or in contract execution.

1.5 "**Countervailing duties**" are imposed in cases where an enterprise abroad is subsidized by its government and encouraged to market its products internationally.

1.6 "**Country of origin**" means the place where the goods were mined, grown or produced or from which the services are supplied. Goods are produced when, through manufacturing, processing or substantial and major assembly of components, a commercially recognized new product results that is substantially different in basic characteristics or in purpose or utility from its components.

1.7 "**Day**" means calendar day

1.8 "**Delivery**" means delivery in compliance of the conditions of the contract or order.

1.9 "**Delivery ex stock**" means immediate delivery directly from stock actually on hand.

1.10 "**Delivery into consignees store or to his site**" means delivered and unloaded in the specified store or depot or on the specified site in compliance with the conditions of the contract or order, the provider bearing all risks and charges involved until the supplies are so delivered and a valid receipt is obtained.

1.11 "**Dumping**" occurs when a private enterprise abroad markets its goods on own initiative in the RSA at lower prices than that of the country of origin and which have the potential to harm the local industries in the RSA.

1.12 "**Force majeure**" means an event beyond the control of the provider and not involving the provider's fault or negligence and not foreseeable. Such events may include, but is not restricted to, acts of the purchaser in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes.

1.13 "**Fraudulent practice**" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of any tenderer, and includes collusive practice among tenderers (prior to or after bid submission) designed

1.14 to establish bid prices at artificial non-competitive levels and to deprive the tenderer of the benefits of free and open competition.

1.15 "**GCC**" means the General Conditions of Contract.

1.16 "**Goods**" means all of the equipment, machinery, and/or other materials that the provider is required to supply to the purchaser under the contract.

1.17 "**Imported content**" means that portion of the bidding price represented by the cost of components, parts or materials which have been or are still to be imported (whether by the provider or his subcontractors) and which costs are inclusive of the costs abroad, plus freight and other direct importation costs such as land costs, dock dues, import duty, sales duty or other similar tax or duty at the South African place of entry as well as transportation and handling charges to the factory in the Republic where the supplies covered by the bid will be manufactured.

1.18 "**Local content**" means that portion of the bidding price which is not included in the imported content provided that local manufacture does take place.

1.19 "**Manufacture**" means the production of products in a factory using labour, materials, components and machinery and includes other related value-adding activities.

1.20 "**Order**" means an official written order issued for the supply of goods or works or the rendering of a service.

1.21 "**Project site**," where applicable, means the place indicated in bidding documents.

1.22 "**Purchaser**" means the organization purchasing the goods.

1.23 "**Republic**" means the Republic of South Africa.

1.24 "**SCC**" means the Special Conditions of Contract.

1.25 "**Services**" means those functional services ancillary to the supply of the goods, such as transportation and any other incidental services, such as installation, commissioning, provision of technical assistance, training, catering, gardening,

security, maintenance and other such obligations of the provider covered under the contract.

1.26 "**Written**" or "**in writing**" means hand-written in ink or any form of electronic or mechanical writing.

2. Application

2.1 These general conditions are applicable to all bids, contracts and orders including bids for functional and professional services (excluding professional services related to the building and construction industry), sales, hiring, letting and the granting or acquiring of rights, but excluding immovable property, unless otherwise in the bidding documents.

2.2 Where applicable, special conditions of contract are also laid down to cover specific supplies, services or works.

2.3 Where such special conditions of contract are in conflict with these general conditions, the special conditions shall apply.

3. General

3.1 Unless otherwise indicated in the bidding documents, the purchaser shall not be liable for any expense incurred in the preparation and submission of a bid. Where applicable a non-refundable fee for documents may be charged.

3.2 Invitations to bid are usually published in locally distributed news media and in the institution's webisite.

4. Standards

4.1 The goods supplied shall conform to the standards mentioned in the bidding documents and specifications.

5. Use of contract documents and information; inspection

5.1 The provider shall not, without the purchaser's prior written consent, disclose the contract, or any provision thereof, or any specification, plan, drawing, pattern, sample, or information furnished by or on behalf of the purchaser in connection therewith, to any person other than a person employed by the provider in the performance of the contract. Disclosure to any such employed person shall be made in confidence and shall extend only so far as may be necessary for purposes of such performance.

5.2 The provider shall not, without the purchaser's prior written consent, make use of any document or information mentioned in GCC clause 5.1 except for purposes of performing the contract.

5.3 Any document, other than the contract itself mentioned in GCC clause 5.1 shall remain the property of the purchaser and shall be returned (all copies) to the purchaser on completion of the provider's performance under the contract if so required by the purchaser.

5.4 The provider shall permit the purchaser to inspect the provider's records relating to the performance of the provider and to have them audited by auditors appointed by the purchaser, if so required by the purchaser.

6. Patent rights

6.1 The provider shall indemnify the purchaser against all third-party claims of infringement of patent, trademark, or industrial design rights arising from use of goods or any part thereof by the purchaser.

6.2 When a provider developed documentation/projects for the department or PROVINCIAL entity, the intellectual, copy and patent rights or ownership or such documents or projects will vest in the department or PROVINCIAL entity.

7. Performance security

7.1 Within thirty (30) days of receipt of the notification of contract award, the success tenderer shall furnish to the purchaser the performance security of the amount specified in SCC.

7.2 The proceeds of the performance security shall be payable to the purchaser as compensation for any loss resulting from the provider's failure to complete his obligations under the contract.

7.3 The performance security shall be denominated in the currency of the contract, or in a freely convertible currency acceptable to the purchaser and shall be in one of the following forms:

(a) a bank guarantee or an irrevocable letter of credit issued by a reputable bank located in the purchaser's country or abroad, acceptable to the purchaser, in the form provided in the bidding documents or another form acceptable to the purchaser; or

(b) a cashier's or certified cheque.

7.4 The performance security will be discharged by the purchaser and returned to the provider not later than thirty (30) days following the date of completion of the provider's performance obligations under the contract, including any warranty obligations, unless otherwise specified.

8. Inspections, tests and analyses

8.1 All pre-bidding testing will be for the account of the tenderer.

8.2 If it is a bid condition that supplies to be produced or services to be rendered should at any stage during production or execution or on completion be subject to inspection, the premises of the tenderer or contractor shall be open, at all reasonable hours, for inspection by a representative of the purchaser or an organization acting on behalf of the purchaser.

8.3 If there are no inspection requirements indicated in the bidding documents and no mention is made in the contract, but during the contract period it is decided that inspections shall be carried out, the purchaser shall itself make the necessary arrangements, including payment arrangements with the testing authority concerned.

8.4 If the inspections, tests and analyses referred to in clause 8.2 & 8.3 show the supplies to be in accordance with the contract requirements, the cost of the inspections, tests and analyses shall be defrayed by the purchaser.

8.5 Where the supplies or services referred to in clauses 8.2 and 8.3 do not comply with the contract requirements, irrespective of whether such supplies or services are accepted or not, the cost in connection with these inspections, tests or analyses shall be defrayed by the provider.

8.6 Supplies and services which are referred to in clauses 8.2 and 8.3 and which do not comply with the contract requirements may be rejected.

8.7 Any contract supplies may on or after delivery be inspected, tested or analysed and may be rejected if found not to comply with the requirements of the contract. Such rejected supplies shall be held at the cost and risk of the provider who shall, when called upon, remove them immediately at his own cost and forthwith substitute them with supplies which do not comply with the requirements of the contract. Failing such removal, the rejected supplies shall be returned at the providers cost and risk. Should the provider fail to provide the substitute supplies forthwith, the purchaser may, without giving the provider further opportunity to substitute the rejected supplies, purchase such supplies as may be necessary at the expense of the provider.

8.8 The provisions of clauses 8.4 to 8.7 shall not prejudice the right of the purchaser to cancel the contract on account of a breach of the conditions thereof, or to act in terms of Clause 23 of GCC.

9. Packaging

1.1 The provider shall provide such packaging of the goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in the contract. The packaging shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit, and open storage. Packaging, case size and weights shall take into consideration, where appropriate, the remoteness of the good's final destination and the absence of heavy handling facilities at all points in transit.

1.2 The packaging, marking and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the contract, including additional requirements, if any, and in any subsequent instructions ordered by the purchaser.

2. Delivery and documents

2.1 Delivery of the goods and arrangements for shipping and clearance obligations, shall be made by the provider in accordance with the terms specified in the contract.

3. Insurance

3.1 The goods supplied under the contract shall be fully insured in a freely convertible currency against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery in the manner specified.

4. Transportation

4.1 Should a price other than an all-inclusive delivered price be required, this shall be specified.

5. Incidental services

5.1 The provider may be required to provide any or all of the following services, including additional services, if any:

(a) performance or supervision of on-site assembly and/or commissioning of the supplied goods;
(b) furnishing of tools required for assembly and/or maintenance of the supplied goods;
(c) furnishing of a detailed operations and maintenance manual for each appropriate unit of the supplied goods;
(d) performance or supervision or maintenance and/or repair of the supplied goods, for a period of time agreed by the parties, provided that this service shall not relieve the provider of any warranty obligations under this contract; and
(e) training of the purchaser's personnel, at the provider's plant and/or on-site, in assembly, start-up, operation, maintenance, and/or repair of the supplied goods.

5.2 Prices charged by the provider for incidental services, if not included in the contract price for the goods, shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the provider for similar services.

6. Spare parts

6.1 As specified, the provider may be required to provide any or all of the following materials, notifications, and information pertaining to spare parts manufactured or distributed by the provider:

1) such spare parts as the purchaser may elect to purchase from the provider, provided that this election shall not relieve the provider of any warranty obligations under the contract, and

2) in the event of termination of production of the spare parts:
   a) Advance notification to the purchaser of the pending termination, in sufficient time to permit the purchaser to procure needed requirements; and
   b) Following such termination, furnishing at no cost to the purchaser, the blueprints, drawings, and specifications of the spare parts, if requested.

15. Warranty

15.1 The provider warrants that the goods supplied under the contract are new, unused, of the most recent or current models, and that they incorporate all recent improvements in design and materials unless provided otherwise in the contract. The provider further warrants that all goods supplied under this contract shall have no defect, arising from design, materials, or workmanship (except when the design and/or material is required by the purchaser's specifications) or from any act or omission of the provider, that may develop under normal use of the supplied goods in the conditions prevailing in the country of final destination.

15.2 This warranty shall remain valid for twelve (12) months after the goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the contract, or for eighteen (18) months after the date of shipment from the port or place of loading in the source country, whichever period concludes earlier, unless specified otherwise.

15.3 The purchaser shall promptly notify the provider in writing of any claims arising under this warranty.

15.4 Upon receipt of such notice, the provider shall, within the period specified and with all reasonable speed, repair or replace the defective goods or parts thereof, without costs to the purchaser.

15.5 If the provider, having been notified, fails to remedy the defect(s) within the period specified, the purchaser may proceed to take such remedial action as may be necessary, at the provider's risk and expense and without prejudice to any other rights which the purchaser may have against the provider under the contract.

16. Payment

16.1 The method and conditions of payment to be made to the pro vider under this contract shall be specified

16.2 The provider shall furnish the purchaser with an invoice accompanied by a copy of the delivery note and upon fulfilment of other obligations stipulated in the contract.

16.3 Payments shall be made promptly by the purchaser, but in no case later than thirty (30) days after submission of an invoice or claim by the provider.

16.4 A once off payment will be made after the submission of a close out report and other relevant information required by Project leader

16.5 Payment will be made in Rand unless otherwise stipulated.

17. Prices

17.1 Prices charged by the provider for goods delivered and services performed under the contract shall not vary from the prices quoted by the provider in his bid, with the exception of any price adjustments authorized or in the purchaser's request for bid validity extension, as the case may be.

18. Increase/decrease of quantities

18.1 In cases where the estimated value of the envisaged changes in purchase does not exceed 15% of the total value of the original contract, the contractor may be instructed to deliver the revised quantities. The contractor may be approached to reduce the unit price, and such offers may be accepted provided that there is no escalation in price.

19. Contract amendments

19.1 No variation in or modification of the terms of the contract shall be made except by written amendment signed by the parties concerned.

20. Assignment

20.1 The provider shall not assign, in whole or in part, its obligations to perform under the contract, except with the purchaser's prior written consent.

21. Subcontracts

21.1 The provider shall notify the purchaser in writing of all subcontracts awarded under this contracts if not already specified in the bid. Such notification, in the original bid or later, shall not relieve the provider from any liability or obligation under the contract.

22. Delays in the provider's performance

22.1 Delivery of the goods and performance of services shall be made by the provider in accordance with the time schedule prescribed by the purchaser in the contract.

22.2 If at any time during performance of the contract, the provider or its subcontractor(s) should encounter conditions impeding timely delivery of the goods and performance of services, the provider shall promptly notify the purchaser in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the provider's notice, the purchaser shall evaluate the situation and may at his discretion extend the provider's time for performance, with or without the imposition of penalties, in which case the extension shall be ratified by the parties by amendment of contract.

22.3 The right is reserved to procure outside of the contract small quantities or to have minor essential services executed if any emergency arises, the provider's point of supply is not situated at or near the place where the supplies are required, or the provider's services are not readily available.

22.4 Except as provided under GCC Clause 25, a delay by the provider in the performance of its delivery obligations shall render the provider liable to the imposition of penalties, pursuant to GCC Clause 22, unless an extension of time is agreed upon pursuant to GCC Clause 21.2 without the application of penalties.

22.5 Upon any delay beyond the delivery period in the case of a supplies contract, the purchaser shall, without canceling the contract, be entitled to purchase supplies of a similar quality and up to the same quantity in substitution of the goods not supplied in conformity with the contract and to return any goods delivered later at the provider's expense and risk, or to cancel the contract and buy such goods as may be required to complete the contract and without prejudice to his other rights, be entitled to claim damages from the provider.

23. Penalties

23.1 Subject to GCC Clause 25, if the provider fails to deliver any or all of the goods or to perform the services within the period(s) specified in the contract, the purchaser shall, without prejudice to its other remedies under the contract, deduct from the contract price, a sum of R500.00 as a penalty, which is calculated on the delivered price of the delayed good or unperformed services using the current prime interest rate calculated for each day of the delay until actual delivery or performance. The purchaser may also consider termination of the contract pursuant to GCC Clause 23.

24. Termination for Default

24.1 The purchaser, without prejudice to any other remedy for breach of contract, by written notice of default sent to the provider, may terminate this contract in whole or in part: (a) if the provider fails to deliver any or all of the goods within the period(s) specified in the contract, or within any extension thereof granted by the purchaser pursuant to GCC Clause 21.2; (b) if the provider fails to perform any other obligation(s) under the contract; or (c) if the provider, in the judgement of the

purchaser, has engaged in corrupt or fraudulent practices in competing for or in executing the contract.

24.2 In the event the purchaser terminates the contract in whole or in part, the purchaser may procure, upon such terms and in such manner as it deems appropriate, goods, works or services similar to those undelivered, and the provider shall be liable to the purchaser for any excess costs for such similar goods, works or services. However, the provider shall continue performance of the contract to the extent not terminated.

25. Anti-Dumping and Counter-Vailing Duties And Rights

25.1 When, after the date of bid, provisional payments are required, or anti-dumping or countervailing duties are imposed, or the amount of a provisional payment or anti-dumping or countervailing right is increased in respect of any dumped or subsidized import, the State is not liable for any amount so required or imposed, or for the amount of any such increase. When, after the said date, such a provisional payment is no longer required or any such anti-dumping or countervailing right is abolished, or where the amount of such provisional payment or any such right is reduced, any such favourable difference shall on demand be paid forthwith by the provider to the purchaser or the purchaser may deduct such amounts from moneys (if any) which may otherwise be due to the provider in regard to supplies or services which he delivered or rendered, or is to deliver or render in terms of the contract or any other contract or any other amount which may be due to him.

26. Force Majeure

26.1 Notwithstanding the provisions of GCC Clauses 22 and 23, the provider shall not be liable for forfeiture of its performance security, damages, or termination for default if and to the extent that hi delay in performance or other failure to perform his obligations under the contract is the result of an event of force majeure.

26.2 If a force majeure situation arises, the provider shall promptly notify the purchaser in writing of such condition and the cause thereof. Unless otherwise directed by the purchaser in writing, the provider shall continue to perform its obligations under the contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the force majeure event.

27. Termination for Insolvency

27.1 The purchaser may at any time terminate the contract by giving written notice to the provider if the provider becomes bankrupt or otherwise insolvent. In this event, termination will be without compensation to the provider, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the purchaser,

28. Settlement of Disputes

28.1 If any dispute or difference of any kind whatsoever arises between the purchaser and the provider in connection with or arising out of the contract, the parties shall make every effort to resolve amicably such dispute or difference by mutual consultation.

28.2 If, after thirty (30) days, the parties have failed to resolve their dispute or difference by such mutual consultation, then either the purchaser or the provider may give notice to the other party of his intention to commence with mediation. No mediation in respect of this matter may be commenced unless such notice is given to the other party.

28.3 Should it not be possible to settle a dispute by means of mediation, it may be settled in a South African court of law.

28.4 Notwithstanding any reference to mediation and / or court proceedings herein,

(a) the parties shall continue to perform their respective obligations under the contract unless they otherwise agree; and

(b) the purchaser shall pay the provider any monies due to the provider for goods delivered and / or services rendered according to the prescripts of the contract.

29. Limitation of Liability

29.1 Except in cases of criminal negligence or wilful misconduct, and in the case of infringement pursuant to Clause 6;

(a) the provider shall not be liable to the purchaser, whether in contract, tort, or otherwise, for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the provider to pay penalties and / or damages to the purchaser; and

(b) the aggregate liability of the provider to the purchaser, whether under the contract, in tort or otherwise, shall not exceed the total contract price, provided that this limitation shall not apply to the cost of repairing or replacing defective equipment.

30. Governing Language

30.1 The contract shall be written in English. All correspondence and other documents pertaining to the contract that is exchanged by the parties shall also be written in English.

31. Applicable Law

31.1 The contract shall be interpreted in accordance with South African laws, unless otherwise specified.

32. Notices

32.1 Every written acceptance of a bid shall be posted to the provider concerned by registered or certified mail and any other notice to him shall be posted by ordinary mail to the address furnished in his bid or to the address notified later by him in writing and such posting shall be deemed to be proper service of such notice.

32.2 The time mentioned in the contract documents for performing any act after such aforesaid notice has been given, shall be reckoned from the date of posting of such notice.

33. TAXES AND DUTIES

33.1 A foreign provider shall be entirely responsible for all taxes, stamp duties, license fees, and other such levies imposed outside the purchaser's country.

33.2 A local provider shall be entirely responsible for all taxes, duties, license fees, etc., incurred until delivery of the contracted goods to the purchaser.

33.3 No contract shall be concluded with any tenderer whose tax matters are not in order. Prior to the award of a bid SARS must have certified that the tax matters of the preferred tenderer are in order.

34. Transfer of Contracts

34.1 The contractor shall not abandon, transfer, assign or sublet a contract or part thereof without the written permission of the purchaser.

35. Amendment of Contracts

35.1 No agreement to amend or vary a contract or order or the conditions, stipulations or provisions thereof shall be valid and of any force unless such agreement to amend or vary is entered into in writing and signed by the contracting parties. Any waiver of the requirement that the agreement to amend or vary shall be in writing, shall also be in writing.

36. Duration

The contract duration is 2 months

C1.4 Form of Guarantee

VARIABLE CONSTRUCTION GUARANTEE – (GCC (2010) 2nd EDITION: 2010)

Director-General
Department of Public Works & Infrastructure
and Infrastructure Government of the Republic
of South Africa

To: ***Department of Public Works & Infrastructure and Infrastructure***
No. 1 Creamery Road
Kings Park
Komani
5320

Sir,

VARIABLE CONSTRUCTION GUARANTEE FOR THE EXECUTION OF A CONTRACT IN TERMS OF GCC (2010) 2nd EDITION 2010

1. With reference to the contract between

_____

_____

(hereinafter referred to as the **"contractor"**) and the Government of the Republic of South Africa in its Department of Public Works & Infrastructure (hereinafter referred to as the **"employer"**), Contract/Tender No:**CHR5-22/23-0015**, for the **EXPLORATION AND INSTALLATION OF BOREHOLE AND BACKUP TANK FOR WHITTLESEA DEPOT.** ***(Appointment of a contractor)*** (hereinafter referred to as the **"contract"**) for the sum of R_____, (_____), (hereinafter referred to as the **"contract sum"**).

I / We,

_____

in my/our capacity as _____and hereby

representing _____ (hereinafter referred to as the **"guarantor"**) advise that the **guarant**or holds at the **employer**'s disposal the sum of R _____, (_____ _____) being 10% of the **contract sum** (excluding VAT), for the due fulfilment of the **contract**.

2. I / We advise that the **guarantor**'s liability in terms of this guarantee shall be as follows:

   (a) From and including the date on which this guarantee is issued and up to and including the day before the date on which the last **certificate of completion** of works is issued, the **guarantor** will be liable in terms of this guarantee to the maximum amount of 10% of the **contract sum** (excluding VAT);

   (b) The **guarantor**'s liability shall reduce to 10 % of the **value of the works** (excluding VAT) as determined at the date of the last **certificate of completion** of works, subject to such amount not exceeding 10% of the **contract sum** (excluding VAT);

   (c) This guarantee shall expire on the date of the last **final approval certificate**.

3. The **guarantor** hereby renounces the benefits of the exceptions *non numeratae pecunia; non causa debiti; excussionis et divisionis;* and *de duobus vel pluribus reis debendi* which could be pleaded against the enforcement of this guarantee, with the meaning and effect whereof I/we declare myself/ourselves to be conversant, and undertake to pay the **employer** the amount guaranteed on receipt of a written demand from the **employer** to do so, stating that (in the **employer**'s opinion and sole discretion):

   (a) the **contractor** has failed or neglected to comply with the terms and/or conditions of the **contract**; or
   (b) the **contractor**'s estate is sequestrated, liquidated or surrendered in terms of the insolvency laws in force within the Republic of South Africa.

4. Subject to the above, but without in any way detracting from the **employer**'s rights to adopt any of the procedures provided for in the **contract**, the said demand can be made by the **employer** at any stage prior to the expiry of this guarantee.
5. The amount paid by the **guarantor** in terms of this guarantee may be retained by the **employer** on condition that upon issue of the last **final approval certificate**, the **employer** shall account to the **guarantor** showing how this amount has been expended and refund any balance due to the **guarantor**.
6. The **employer** shall have the absolute right to arrange his affairs with the **contractor** in any manner which the **employer** deems fit and the **guarantor** shall not have the right to claim his release on account of any conduct alleged to be prejudicial to the **guarantor**. Without derogating from the aforegoing, any compromise, extension of the construction period, indulgence, release or variation of the **contractor**'s obligation shall not affect the validity of this guarantee.
7. The **guarantor** reserves the right to withdraw from this guarantee at any time by depositing the guaranteed amount with the **employer**, whereupon the **guarantor**'s liability ceases.
8. This guarantee is neither negotiable nor transferable, and

   (a) must be surrendered to the **guarantor** at the time when the **employer** accounts to the **guarantor** in terms of clause 5 above, or
   (b) shall lapse in accordance with clause 2 (c) above.
9. This guarantee shall not be interpreted as extending the **guarantor**'s liability to anything more than payment of the amount guaranteed.

SIGNED AT _____ **ON THIS**__ **DAY OF**_____ **20**_

AS WITNESS

1. _____

2. _____

_____

By and on behalf of

_____

_____

_____

(insert the name and physical address of the guarantor)

NAME:_____

CAPACITY:_____
(duly authorised thereto by resolution attached marked Annexure A)

DATE:_____

A. No alterations and/or additions of the wording of this form will be accepted.

B. The physical address of the guarantor must be clearly indicated and will be regarded as the guarantor's *domicilium citandi et executandi,* for all purposes arising from this guarantee.

C. This GUARANTEE must be returned to: _____

FIXED CONSTRUCTION GUARANTEE - (GCC (2010) 2nd - EDITION: 2010)

Director-General
Department of Public Works & Infrastructure
Government of the Republic of South Africa

To: ***Department of Public Works & Infrastructure***
No. 1 Creamery Road
Kings Park
Komani
5320

Sir,

FIXED CONSTRUCTION GUARANTEE FOR THE EXECUTION OF A CONTRACT IN TERMS OF GCC (2010) 2ND EDITION 2010

1. With reference to the contract between_____

_____(hereinafter referred to as the "**contractor"**) and the Government of the Republic of South Africa in its Department of Public Works & Infrastructure (hereinafter referred to as the **"employer"**), Contract/Tender No:___ _____, for the **EXPLORATION AND INSTALLATION OF BOREHOLE AND BACKUP TANK FOR WHITTLESEA DEPOT *(Appointment of a contractor)*** (hereinafter referred to as the **"contract"**), for the sum of R _____, (_____), (hereinafter referred to as the **"contract sum"**).

I / We, _____

in my/our capacity as _____and hereby

representing _____(hereinafter referred to as the "**guarantor"**) advise that the **guarantor** holds at the e**mployer**'s disposal the sum of R_____, (_____) being 5% of the **contract sum** (excluding VAT), for the due fulfillment of the **contract**.

2. The **guarantor** hereby renounces the benefits of the exceptions *non numeratae pecunia; non causa debiti; excussionis et divisionis;* and *de duobus vel pluribus reis debendi* which could be pleaded against the enforcement of this guarantee, with the meaning and effect whereof I/we declare myself/ourselves to be conversant, and undertake to pay the **employer** the amount guaranteed on receipt of a written demand from the **employer** to do so, stating that (in the **employer**'s opinion and sole discretion):

   (a) the **contractor** has failed or neglected to comply with the terms and/or conditions of the **contract**; or
   (b) the **contractor**'s estate is sequestrated; liquidated or surrendered in terms of the insolvency laws in force within the Republic of South Africa.

3. Subject to the above, but without in any way detracting from the **employer**'s rights to adopt any of the procedures provided for in the **contract**, the said demand can be made by the **employer** at any stage prior to the expiry of this guarantee.

4. The amount paid by the **guarantor** in terms of this guarantee may be retained by the **employer** on condition that upon the issue of the last **final approval certificate**, the **employer** shall account to the **guarantor** showing how this amount has been expended and refund any balance due to the **guarantor**.

5. The **employer** shall have the absolute right to arrange his affairs with the **contractor** in any manner which the **employer** deems fit and the **guarantor** shall not have the right to claim his release on account of any conduct alleged to be prejudicial to the **guarantor**. Without derogating from the

aforegoing, any compromise, extension of the construction period, indulgence, release or variation of the **contractor**'s obligation shall not affect the validity of this guarantee.

6. The **guarantor** reserves the right to withdraw from this guarantee at any time by depositing the guaranteed amount with the **employer**, whereupon the **guarantor**'s liability ceases.

7. This guarantee is neither negotiable nor transferable, and

   (a) must be surrendered to the **guarantor** at the time when the **employer** accounts to the **guarantor** in terms of clause 4 above, or

   (b) shall lapse on the date of the last **certificate of completion** of works.

8. This guarantee shall not be interpreted as extending the **guarantor**'s liability to anything more than the payment of the amount guaranteed.

SIGNED AT_____ **ON THIS**__ **DAY OF**_____**20**____**.**

AS WITNESS

1. _____

2. _____

_____

By and on behalf of

_____

_____

_____

(insert the name and physical address of the guarantor)

NAME:_____

CAPACITY:_____
(duly authorised thereto by resolution attached marked Annexure A)

DATE:_____

A. No alterations and/or additions of the wording of this form will be accepted.

B. The physical address of the guarantor must be clearly indicated and will be regarded as the guarantor's *domicilium citandi et executandi*, for all purposes arising from this guarantee.

C. This GUARANTEE must be returned to:

_____

_____

C1.5 Occupational Health and Safety Mandatary Agreement

AGREEMENT IN TERMS OF SECTION 37(2) OF THE OCCUPATIONAL HEALTH & SAFETY ACT (ACT 85 Of 1993), AS AMENDED & CONSTRUCTION REGULATION 5.1(k)

OBJECTIVES

To assist The Department of Public Works & Infrastructure and Infrastructure (DPWI) in order to comply with the requirements of:

1. The Occupational Health & Safety (Act 85 of 1993), as amended and its regulations and
2. The Compensation for Occupational Injuries & Diseases Act (Act 130 of 1993) also known as the (COID Act).
3. Construction Regulations 2014

To this end an Agreement must be concluded before any contractor/ subcontracted work may commence

The parties to this Agreement are:

Name of Organisation:	**The Department of Public Works & Infrastructure and Infrastructure**
Physical Address:	**No. 1 Creamery Road Kings Park Komani 5320**

Hereinafter referred to as "Client"

Name of Organisation:	
Physical Address:	

Hereinafter referred to as "the Mandatary/ Principal Contractor"

MANDATARY'S MAIN SCOPE OF WORK

1. DEFINITIONS

1.1 "Mandatary" is defined as an agent, a principal contractor or a contractor for work, or service provider appointed by the Client to execute a scope of work on its behalf, but WITHOUT DEROGATING FROM HIS/HER STATUS IN HIS/HER RIGHT AS AN EMPLOYER or user of the plant.

1.2 "**Client**" refers to ACSA;

1.3 "**Parties**" means ACSA and the Contractor, and "Party" shall mean either one of them, as the context indicates;

1.4 "**Services**" means the services provided by the Contractor or Stakeholder to ACSA;

1.5 "**Stakeholder**" refers to companies conducting business at ACSA premises or within close proximity where there is an interface with ACSA operations;

1.6 "**The OHS Act**" refers to Occupational Health and Safety Act 85 of 1993, as amended;

"**The COID Act**" refers to Compensation for Occupational Injuries and Diseases Act 61 of 1997, as amended; and

1.7 "**SHE**" means Safety, Health and Environment.

2. GENERAL INFORMATION FORMING PART OF THIS CONTRACT

a) The Occupational Health & Safety Act comprises of SECTION 1-50 and all unrepealed REGULATIONS promulgated in terms of the former Machinery and Occupational Safety Act No.6 of 1983 as amended as well as other REGULATIONS which may be promulgated in terms of the Act and other relevant Acts pertaining to the job in hand.

b) Section 37 of the Occupational Health & Safety Act potentially punishes Employers for unlawful acts or omissions of Mandatories where a Written Agreement between the parties has not been concluded containing arrangements and procedures to ensure compliance with the said Act BY THE MANDATORY.

c) All documents attached or refer to in the above Agreement form an integral part of the Agreement.

d) To perform in terms of this agreement Mandataries must be familiar and conversant with the relevant provisions of the Occupational Health & Safety Act 85 of 1993 (OHS Act) and applicable Regulations.

e) Mandatories who utilise the services of other contractors must conclude a similar Written Agreement with those companies.

f) Be advised that this Agreement places the onus on the Mandatary to contact the CLIENT in the event of inability to perform as per this Agreement.

g) This Agreement shall be binding for all work the Mandatory undertakes for the Client and remains in force for the duration of the contracted period as per Main Contract signed by both parties.

h) The contractor shall submit all necessary documentation as per SHE File Index to the Client seven days prior to starting with any work.

3. THE UNDERTAKING

The Mandatory undertakes to comply with:

3.1 REPORTING

The Mandatary and/or his / her designated person shall report to the Client prior to commencing any work at the airports as well as when the activities change from the original scope ofwork.

3.2 WARRANTY OF COMPLIANCE

3.2.1 In terms of this agreement the Mandatary warrants that he / she agrees to the arrangements and procedures as prescribed by the Client and as provided for in terms of Section 37(2) of the OHS Act for the purposes of compliance with the Act.

3.2.2 The Mandatary further warrants that he / she and / or his / her employees undertake to maintain such compliance with the OHS Act. Without

derogating from the generality of the above, or from the provisions of the said agreement, the Mandatary shall ensure that the clauses as hereunder described are at all times adhered to by himself / herself and his / her employees.

3.3.3 The Mandatary hereby undertakes to ensure that the health and safety of any other person on the premises is not endangered by the conduct of his / her activities and that of his / her employees.

3.3 SHE RISK MANAGEMENT

3.4 The Mandatary shall ensure that a baseline risk assessment is performed by a competent person before commencement of any work in the Client's premises. A baseline risk assessment document will include identification of hazards and risk, analysis and evaluation of the risks and hazards identified, a documented plan and safe work procedures to mitigate, reduce or control the risks identified, and a monitoring and review plan of the risks and hazards.

3.5 The Mandatary shall review the risk registers as and when the scope of work changes and keep the latest version on the SHE File.

3.4 MEDICAL EMERGENCY RESPONSE

The Mandatary shall submit a detailed emergency response procedure to the Client OHS Department as part of the SHE File prior to start of work. The procedure shall stipulate how the Mandatary intends to attend to medical emergencies. In the sites where the Client has onsite clinic services, the medical staff can provide first line response and stabilise the patient however the Mandatary shall then activate its own medical response procedure and transport the patient to the medical facilities for further medical attention.

3.5 APPOINTMENTS AND TRAINING

3.5.1 The Mandatary shall appoint competent persons as per Section 16(2) of the OHS Act. Any such appointed person shall be trained on any occupational health and safety matter and the OHS Act provisions pertinent to the work that is to be performed under his / her responsibility. Copies of any appointments and certificates made by the Mandatary shall immediately be provided to the Client.

3.5.2 The Mandatary shall at the beginning of the project or activities where there are 5 people and more people working appoint a full-time dedicated Health and Safety resource whom will be dedicated to the project to ensure that Safety, Health and Environmental Requirements are met at all times. The allocated resource shall be based where the project is undertaken for the duration of the project or scope of work execution. The resource shall be trained and qualified on Occupational Health and Safety matters and the OHS Act provisions pertinent to the work that is to be carried out.

3.5.3 The Mandatary shall further ensure that all his / her employees are trained on the health and safety aspects relating to the work and that they

understand the hazards associated with such work being carried out on the airports. Without derogating from the foregoing, the Mandatary shall, in particular, ensure that all his / her users or operators of any materials, machinery or equipment are properly trained in the use of such materials, machinery or equipment.

3.5.4 Notwithstanding the provisions of the above, the Mandatary shall ensure that he / she, his / her appointed responsible persons and his / her employees are at all times familiar with the provisions of the OHS Act, and that they comply with the provisions of the Act.

3.5.5 The Mandatary shall at all material times be responsible for all costs associated with the performance of its own obligations and compliance with the terms of this Agreement, unless otherwise expressly agreed by the Parties in writing.

3.6 SUPERVISION, DISCIPLINE AND REPORTING

3.6.1 The Mandatary shall ensure that all work performed on the Clients premises is done under strict supervision and that no unsafe or unhealthy work practices are permitted. Discipline regarding health and safety matters shall be strictly enforced against any of his / her employees regarding non- compliance by such employee with any health and safety matters.

3.6.2 The Mandatary shall further ensure that his / her employees report to him / her all unsafe or unhealthy work situations immediately after they become aware of the same and that he / she in turn immediately reports these to the Client within 48 hours with the action taken to mitigate the risk.

3.6.3 Where the hazard or risk identified is the responsibility of the Client to action, the Mandatary shall notify the Client OHS and Safety Department within 24 hours of becoming aware of the hazard or risk for prompt action to mitigate.

3.7 COOPERATION

3.7.1 The Mandatary and his/her employees shall provide full co-operation and information if and when the Client or his / her representative enquires into occupational health and safety issues concerning the Mandatary. It is hereby recorded that the Client and his / her representative shall at all times be entitled to make such an inquiry.

3.7.2 Without derogating from the generality of the above, the Mandatary and his / her responsible persons shall make available to the Client and his / her representative, on request, all and any checklists and inspection registers required to be kept by him / her in respect of any of his / her materials, machinery or equipment and facilities.

3.8 WORK PROCEDURES

3.8.1 The Mandatary shall, after having established the dangers associated with

the work performed, develop and implement mitigation measures to minimize or eliminate such dangers for the purpose of ensuring a healthy and safe working environment.

3.8.2 The Mandatary shall then ensure that his / her responsible persons and employees are familiar with such mitigation measures. This includes the lock out tag out processes relating to the use of machinery.

3.8.3 The Mandatary shall implement any other safe work practices as prescribed by the Employer and shall ensure that his / her responsible persons and employees are made conversant with and adhere to such safe work practices.

3.8.4 The Mandatary shall ensure that work for which a permit is required by the Employer or any statute is not performed by his / her employees prior to the obtaining of such a permit.

3.9 HEALTH AND SAFETY MEETINGS

3.9.1 OHS Act requires that Health and Safety Committees be established in case where employee count exceeds 20 onsite, however due to the duration and the nature of the scope of work executed by the contractors and stakeholders enforces that regardless of employees at the airports. The Mandatary shall establish his / her own health and safety committee(s) and ensure that his / her employees, being the committee members, hold health and safety representatives to attend the Employer's health and safety committee meetings on monthly basis.

3.9.2 The Mandatary Section 16(2) appointed and SHE resource shall attend the Client SHE meetings as per the schedule communicated. In cases where the Mandatary delegated resources are not able to attend the meeting, an apology shall be submitted to the Client OHS Manager 24 hours before the meeting. An alternative representative shall be deployed to attend the meeting on the half of the Mandatary.

3.9.3 The Mandatary appointed Section 16(2) and SHE resource shall not skip more than three SHE Committee meetings a year.

3.10 COMPENSATION REGISTRATION/INSURANCE

3.10.1 The Mandatary warrants that all their employees and/or their contractor's employees if any are covered in terms of the COID Act, which shall remain in force whilst any such employees are present on the Client's premises. A letter is required prior commencing any work on site confirming that the Principal contractor or contractor or stakeholder is in good standing with the Compensation Fund or Licensed Insurer.

3.10.2 The Mandatary warrants that they are in possession of the following insurance cover, which cover shall remain in force whilst they and /or their employees are present on the Client's premises, or which shall remain in force for that duration of their contractual relationship with the Client,

whichever period is the longest.

3.10.3 The Mandatary shall provide the Client with Public Liability Insurance Cover as required by the Main Contract

3.10.4 Any other Insurance cover that will adequately makes provision for any possible losses and/or claims arising from their and /or their Subcontractors and/or their respective employee's acts and/or omissions on the Client's premises.

3.10.5 The Mandatary shall send updated Letter of Good Standing to the Client as and when the Mandatary receives it to ensure that the most valid version is available.

3.11 MEDICAL EXAMINATIONS

3.11.1 The Mandatary shall ensure that all his / her employees undergo routine medical examinations and that they are medically fit for the purposes of the work they are to perform.

3.11.2 Copies of such medical fitness certificates shall be made available to Client as part of the SHE file for review to ensure that they have been conducted by a reputable Occupational Health Practitioner registered with Health Professions Council of South Africa (HPCSA) as a doctor and specialist Occupational Medical Practitioner. Any other additional medical assessment shall be conducted in line with risk exposures.

3.11.3 Standard (Basic) medical tests shall constitute the following assessments as minimum:

- Individual's history of general and previous occupational health
- Comprehensive physical examination for evaluation of systemic function
- Blood Pressure Measurement
- Weight, Height and Body Mass Index
- Urine screening
- Drug screening
- Audio screening
- Lung Function Test
- Keystone eye test
- Work at Height Questionnaire
- Muscular skeletal questionnaire

3.12 INCIDENT REPORTING AND INVESTIGATION

3.12.1 All Safety, Health and Environmental Incidents shall be reported to the Client OHS and Safety Department within two hours from the time of occurrence via a phone call, sms or email or before end of shift. This shall be followed by a formal report in a form of a preliminary report within forty-eight (48) hours.

3.12.2 All incidents referred to in Section 24 of the OHS Act shall be reported by the Mandatary to the Department of Labour and copies of such reporting to be sent to the Client. The Mandatary shall further provide copies of any written documentation and medical reports relating to any incident.

3.12.3 The Client retains an interest in the reporting of any incident as described above as well as in any formal investigation and/or inquiry conducted in terms of section 32 of the OHS-Act into such incident.

3.12.4 The Client reserves a right to hold its own investigation into any incident where it deems it is not satisfied with the incident investigation or where the severity of the incident is fatal or damage beyond a value of 1 million and above.

3.13 SUB CONTRACTORS

3.13.1 The Mandatary shall notify the Client of any subcontractor he / she may wish to source to perform work on his / her behalf on the Client premises. It is hereby recorded that all the terms and provisions contained in this clause shall be equally binding upon the subcontractor prior to the subcontractor commencing with the work. Without derogating from the generality of this paragraph:

3.13.2 The Mandatary shall ensure that the sub-contractor meets all the requirements and is competent for the scope of work contracted for. This includes that approval of the SHE file, SHE Plans associated with the work.

3.14 SECURITY AND ACCESS

The Mandatary shall request and familiarise its employees with the Client security rules which is not included in this agreement.

3.15 FIRE PRECAUTIONS AND FACILITIES

3.15.1 The Mandatary shall ensure that all his / her employees are familiar with fire precautions at the site(s), which includes fire-alarm signals and emergency exits, and that such precautions are adhered to.

3.15.2 This includes participating on planned and unplanned emergency drills organised the Client.

3.16 FACILITIES

The Mandatary shall have a program to upkeep and maintain the facilities leased out to it /shared with/ by the Client as stipulated on lease agreement.

3.17 HYGIENE AND CLEANLINESS

The Mandatary shall ensure that the work site, ablution, offices and surround area is at all times maintained to the reasonably practicable level of hygiene and cleanliness. In this regard, no loose materials shall be left lying about unnecessarily and the work site shall be cleared of waste material regularly and on completion of the work.

3.18 INTOXICATION AND SUBSTANCE ABUSE

3.18.1 Entry to the airside is subjected to Aviation Safety Requirements in line with Client Substance Abuse Policy. No intoxicating substance of any form shall be allowed on site where airside or land side. Any person suspected of being intoxicated shall not be allowed on the site. Any person required to take medication shall notify the relevant responsible person thereof, as well as the potential side effects of the medication.

3.18.2 The Client reserves a right to do substance abuse testing and main entry points for the Mandatary employees.

3.18.3 Intoxication limits shall be adhered to as stipulated on Client Substance Abuse Policy.

3.18.4 Records of substance abuse testing shall be filed on the SHE File and made available to the Employer on request.

3.19 PERSONAL PROTECTIVE EQUIPMENT

3.19.1 The Mandatary shall ensure that his / her responsible persons and employees are provided with adequate personal protective equipment (PPE) for the work they may perform and in accordance with the requirements of General Safety Regulation 2 (1) of the OHS Act. The Mandatary shall further ensure that his / her responsible persons and employees wear the PPE issued to them at all times.

3.19.2 The Mandatary shall monitor compliance to PPE of his/her own employees at all times, The Client can at its discretion conduct random PPE compliance inspections and these can be recorded officially on the Client non-conformance reporting tool.

3.19.3 The Mandatary shall keep records PPE Control cards of each employee those shall be kept on SHE File.

3.20 PLANT, MACHINERY AND EQUIPMENT

3.20.1 The Mandatary shall ensure that all the plant, machinery, equipment and/or vehicles he / she may wish to utilize on the Client premises is/are at all times of sound order and fit for the purpose for which it/they is/are attended to, and that it/they complies/comply with the requirements of Section 10 of the OHS Act.

3.20.2 Where the Mandatary equipment's interface to the Client's equipment's, a joint risk assessment shall be conducted by the Mandatary and the Client

OHS department in order for the risks to be mitigated prior to the use of such equipment's. It is the responsibility of the Mandatary to notify the Client OHS department of such equipment's and machinery.

3.20.3 In accordance with the provisions of Section 10(4) of the OHS Act, the Mandatary hereby assumes the liability for taking the necessary steps to ensure that any article or substance that it erects or installs at the sites, or manufactures, sells or supplies to or for the Client, complies with all the prescribed requirements and will be safe and without risks to health and safety when properly used.

3.21 USAGE OF THE CLIENT'S EQUIPMENT

3.21.1 The Mandatary hereby acknowledge that his / her employees are not permitted to use any materials, machinery or equipment of the Employer unless the prior written consent of the Client has been obtained, in which case the Mandatary shall ensure that only those persons authorized to make use of same, have access thereto.

3.21.2 The Client shall ensure that it isolates and apply LOTO on any equipment's and machinery where there is an unexpected start up or flow of energy. The Mandatary has a responsibility to apply its own LOTO procedures before starting with work and post the use of the equipment and machinery.

3.22 PERMIT MANAGEMENT

3.22.1 The Mandatary shall ensure that work for which the issuing of permit to work is required shall not be performed prior to the obtaining of a duty completed approved permit by the Client or relevant Authority.

3.22.2 The Mandatory shall notify the Client of any work to be undertaken on site in order for the Permit To Work to be issued.

3.23 TRANSPORTATION

3.23.1 The Mandatary shall ensure that all road vehicles used on the sites are in a roadworthy condition and are licensed and insured. All drivers shall have relevant and valid driving licenses and vehicle shall carry passengers unless it is specifically designed to do so. All drivers shall adhere to the speed limits and road signs on the premises at all times.

3.23.2 No employees on premises permitted in back of LDV (bakkie) and in front of LDV each driver and passenger must have a separate seat belt.

3.23.3 In the event that any hazardous substances are to be transported on the premises, the Mandatary shall ensure that the requirements of the Hazardous Substances Act 15 of 1973 are complied with fully all times.

3.24 CLARIFICATION

In the event that the Mandatary requires clarification of any of the terms or provisions of this agreement, he / she should contact the Client OHS Department.

3.25 DURATION OF AGREEMENT

This agreement shall remain in force for the duration of the work to be performed by the Mandatary and/or while any of the Mandatary's employees are present on the Client site.

3.26 NON-COMPLIANCE WITH THE AGREEMENT

If Mandatary fails to comply with any provisions of this agreement, the Client shall be entitled to give the Fourteen (14) days' notice in writing to remedy such non-compliance and if the Mandatary fails to comply with such notice, then the Client shall forthwith be entitled but not obliged, without prejudice to any other rights or remedies which the Mandatary may have in law,

- Apply penalties as stipulated on the main contract between Mandatory and the Client.
- To claim immediate performance and/or payment of such obligations.
- Should Mandatary continue to breach the contract on three occasions for the same deviation, then the Client is authorised to suspend the main contract without complying with the condition stated in clause above.

3.27 INDEMNITY

The Mandatary hereby indemnifies the Client against any liability, loss, claims or proceedings whatsoever, whether arising in Common Law or by Statute; consequent personal injuries or the death of any person whomsoever (including claims by employees of the Mandatary and their dependents); or consequent loss of or damage to any moveable or immoveable property arising out of or caused by or in connection with the execution of the Mandatary's contract with the Client, unless such liabilities, losses, claims or proceedings whatsoever are attributable to the Client's faults. The Mandatary or his/her employees is liable to prove without reasonable doubt that the loss is due to the Client's fault or negligence.

COMPLIANCE WITH THE OCCUPATIONAL HEALTH & SAFETY ACT 85 OF 1993

The Mandatary undertakes to ensure that they and/or their subcontractors if any and/or their respective employees will at all times comply with the following conditions:

a) All work performed by the Mandatary on the Client's premises must be performed under the close supervision of the Mandatary's employees who are to be trained to understand the hazards associated with any work that the Mandatary performs on the Client's premises.

b) The Mandatary shall be assigned the responsibility in terms of Section 16(1) of the OHS Act 85 of 1993, if the Mandatary assigns any duty in terms of Section 16(2), a copy of such written assignment shall immediately be forwarded to the Client.

c) The Mandatary shall ensure that he/she familiarise himself/herself with the requirements of the OHS Act 85 of 1993 and that s/he and his/her employees and any of his subcontractors comply with the requirements.

3.28 FURTHER UNDERTAKING

Only a duly authorised representative appointed in terms of Section 16.2 of the OHS Act is eligible to sign this agreement on behalf of the Mandatary. The signing power of this representative must be designated in writing. A copy of this letter must be made available to the Client.

The Contract/Project Manager shall sign this agreement as the Client's representative.

ACCEPTANCE BY MANDATARY

In terms of section 37(2) of the Occupational Health & Safety Act 85 of 1993 and section 5.1(k) of the Construction Regulations 2014,

I_____a duly authorised 16.2 Appointee acting for and on behalf of _____ _____(company name) undertake to ensure that the requirements and the provision of the OHS Act 85 of 1993 and its regulations are complied with.

Mandatary – WCA / Federated Employers Mutual No _____ _____

Expiry date _____ _____

_____ _____
SIGNATURE ON BEHALF OF MANDATARY DATE
(Warrant his authority to sign)

Witnesses:

1._____

2._____

_____ _____
SIGNATURE ON BEHALF OF THE CLIENT DATE
(PUBLIC WORKS AND INFRASTRUCTURE)

Witnesses:

3._____

4._____

PART C2: PRICING DATA

C2.1 **Pricing Instructions**

C2.2 **Bill of Quantities**

C2.1 PRICING INSTRUCTIONS

Project title:	**EXPLORATION AND INSTALLATION OF BOREHOLE AND BACKUP TANK FOR WHITTLESEA DEPOT.**
Tender No:	**CHR5-22/23-0015**

Pricing Assumptions mean the criteria as set out `below, read together with all Parts of this contract document, which it will be assumed in the contract, that the tenderer has taken into account when developing his prices.

1. This Bill of Quantities has to be read together with the Articles of the Agreement, the Conditions of Contract and Special Conditions of Contract, the Form of Tender, the General Specification, the Project Specification and the Drawings.

2. The method of measurement published by the South African Bureau of Standards in clause 8 of the Standardised Specifications for Civil Engineering Construction is applicable, subject to the variations and amendments contained in the section “Applicable SABS 1200 standardised specifications”.

3. General instruction and description of the Work or materials given in the Specification will not be repeated in the Bill of Quantities. It will only be referred to. Doorbell of reference between brackets, to particular Clause in the Conditions of Contract(C-22) or, Special Conditions of Contract(SC-11), General Specification(19.1.3), Project Specification(PS 11) or to a Drawing (Drawing S719-C-140-01).

4. The clauses in a specification in which further information regarding the schedule item appears under "Reference clause" in the Schedule. The reference clauses indicated are not necessarily the only sources of information in respect of scheduled items. Further information and specifications may be found elsewhere in the contract documents. Standardised Specifications are identified by the letter or letters which follow SABS in the SABS 1200 series of specifications, eg. G for SABS 1200 G.

5. The quantities set out in the Bills of Quantities are the estimated quantities of the Contract Works, but the Contractor will be required to undertake whatever quantities may be directed by the Engineer from time to time. The Contract Price for the completed contract shall be computed from the actual quantities of work done, valued at the relevant unit rates and prices.

6. The prices and unit prices given in the Bill of Quantities, is all-embracing prices and it should cover the values of the different items completely and has to include all costs and expenses which may occur and for the building of the Work as described and costs and expenses that are required as well as all general liabilities, obligations and risks which forms a part of this contract. The prices should be given separate in the item(s) if special accountability, responsibilities and risks as in the above occurs.

7. A price or unit price has to be filled in against every item in the Bill of Quantities even if the amount isn’t shown. Items where no price or unit price has been filled in, will be regarded as covered by the other prices and unit prices in the Bill of Quantities. VAT must no be included in thetariff’s.

8. Unit rates would be regarded as correctly if any difference occurs between unit prices and the total and the total will be corrected according to. The unit prices will be calculated arithmetical in case of omissions.

9. Payments will only be made for items occurring in the Bill of Quantities and if the Contractor thinks that provision hasn't been made for some items, the item should be allowed under another item.

10. Except where rates only are required, insert all amounts to be included in the total tendered price in the "Amount" column and show the corresponding total tendered price.

11. The units of measurement described in the Bills of Quantities are metric units. Abbreviations which may be used in these Bills of Quantities are as follows:

mm	=	millimetre	h	=	hour
m	=	metre	kg	=	kilogram
km	=	kilometre	t	=	ton (1000 kg)
m2	=	square metre	No.	=	number
m2.pass	=	square metre-pass	sum	=	lump sum
ha	=	hectare	MN	=	meganewton
m3	=	cubic metre	MN.m	=	meganewton-metre
m3.km	=	cubic metre-kilometre	P C sum	=	Prime Cost sum
l	=	litre	Prov sum	=	Provisional sum
kl	=	kilolitre	kW	=	kilowatt
Ml	=	megalitre	%	=	per cent
MPa	=	megapascal			

The Employer has the right whereas any measurements and/or payments were made before the final Payment Certificate to inspect it and if it is incorrect to correct it. The Employers has the right to remove and correct any work not complying with the specification before the submission of the last Payment Certificate.

C2.2: BILL OF QUANTITIES

Project title:	**EXPLORATION AND INSTALLATION OF BOREHOLE AND BACKUP TANK FOR WHITTLESEA DEPOT.**
Tender No:	**CHR5-22/23-0015**

BILL NO. 1: PRELIMINARIES

ITEM	DESCRIPTION	UNIT	QUANT-ITY	RATE	AMOUNT
1	**PRELIMINARIES and GENERAL**				
1.1	Provide insurance cover for the works, in the amount of 100% of the total bid price. The insurance to be obtained from a reputable insurance Company as approved by the Client.	Sum	1		
1.2	Transport and Set Up at borehole site of all equipment and maintain drill rigs for the complete construction of the borehole with all accessories, associated arrangement, auxiliary works, personnel as well as withdrawal after completion including setting up and moving after unsuccessful drilling.	Sum	1		
1.3	Site Preparation of the drill sites and clearing of all drill sites of all trees, bush, undergrowth and any other vegetation obstructing the execution of all contractual works.	Sum	1		
1.4	Preparation of working drawings and “As installed/ as built” record drawings.	Sum	1		
1.5	All conditions of contract	Sum	1		
Total Bill No. 1 Carried forward to summary page					

BILL NO. 2: OCCUPATIONAL HEALTH AND SAFETY

ITEM	DESCRIPTION	UNIT	QUANT-ITY	RATE	AMOUNT
2.1	Preparation of the Contractor's site-specific Health and Safety Plan	Sum	1		
2.2	Principal Contractor's initial obligations in respect of the Occupational Health and Safety Act and Construction Regulations	Sum	1		
2.3	Provision of Personal Protective Equipment (PPE)				
2.3.1	(a) Reflective vests	No.	6		
2.3.2	(b) Hard hats	No.	6		
2.3.3	(c) Protective foot wear	No.	6 pairs		
2.3.4	(d) Earplugs	No.	50		
2.3.5	(e) Dust masks	No.	100		
2.3.6	(f) Gloves	No.	6		
2.3.7	(g) High visibility overalls to SARTSM Chapter 13 Level 3	No.	6		
2.3.8	(h) Ear Defenders SABS approved	No.	6		
2.4	Cost of medical certificates and medical surveillance				
2.4.1	(a) Initial (baseline) medical examinations	No.	6		
2.5	Induction training	Item.	1		
2.6	Provision of First Aid Boxes to GSR requirements	No.	1		
	Total Bill No.2 Carried forward to summary page				

BILL NO. 3: SITING OF GROUND WATER BOREHOLE POSITION					
ITEM	**DESCRIPTION**	**UNIT**	**QUANT-ITY**	**RATE**	**AMOUNT**
3.1	Borehole Siting (feasibility) to be conducted by a Qualified Hydrogeologists which will provide a technical report and a design drawing by conducting Geohydrological desktop study, physical surveys (by using mechanical instruments) and identify suitable area with a high-water yield. A detailed breakdown cost of this professional service to be provided on a separate sheet but the SUM amount still to be reflected on this BOQ. ITEM 3.1. The Geophysical techniques should include but not limited to: (a) Magnetic Surveys (b) Electrical Resistivity Surveys (c) Seismic Refraction Surveys (d) Frequency Domain Electromagnetic Surveys (e) Gravimetric Survey The Services of the Hydrogeologist will be required throughout the process and their services will include: Pre-feasibility Study, Hydro census, Borehole Siting, Supervision, Reporting and Commissioning of work. **Note: If the feasibility study is not successful or the feasibility report by a Qualified Hydrogeologist suggests lack of or absence of water resources within the 200m depth, all subsequent stages of this borehole development as stated in this bid document will be discontinued and the tender will be terminated.**	Sum	1		
	Total Bill No.3 Carried forward to summary page				

BILL NO. 4: BOREHOLE DRILLING AND CONSTRUCTION					
ITEM	**DESCRIPTION**	**UNIT**	**QUANT-ITY**	**RATE**	**AMOUNT**
4.1	**Note: Provided that the borehole siting and feasibility study on Bill No. 3 is successful, the following works shall then commence.** Drilling of a 165mm diameter of borehole by using a Rotary air Percussion drilling method with all consolidated rock formation and overburden. Development (Air Flush) Drilling contractor to closely work under the direct Supervision of the Hydrogeologist who will verify and document the construction parameters of the borehole and also log the Geological Formations of the Borehole. Complete including all costs				
	i. Drilling Depth Range: 0 - 200m	m	200		
Ref. C3.2 (L)	ii. Installation of mild steel 3 - 4mm thickness casing and screen complete with Sanitary Seal, welded on cap, gravel pack 6mm supplied and delivered to site and installed, drilling foam and Concrete Block around casing. **Note: It is not expected that the borehole will have to be completed with PVC casing and screens. If conditions necessitate this, a decision will be made in the field. The rates for supplying and installing 125 / 144 mm PVC casing and screen must be supplied with the quote.**	Item	1		
	Total Bill No.4 Carried forward to summary page				

BILL NO. 5: PUMP TEST AND LABORATORY WATER SAMPLING					
ITEM	**DESCRIPTION**	**UNIT**	**QUANT-ITY**	**RATE**	**AMOUNT**
5.1	Test pumping results to be interpreted and verified by the Hydrogeologist, Water Level Monitoring to be recorded on all stages. Data Recordings both Soft and Hard Copy must be provided.				
	i. Slug test which should include variable discharge for 4hrs, 24 hr constant discharge, recovery monitoring of 1 hour. Complete	Sum	1		
	ii. Borehole Disinfection: application of a Granular Chlorine (HTH or equivalent). Complete	Sum	1		
	iii. Borehole capping. Complete	Sum	1		
	iv. Borehole Water Sampling and purification system recommendation, if deemed necessary.	Sum	1		
	Total Bill No.5 Carried forward to summary page				

BILL NO 6: EARTHWORKS AND EXCAVATION FOR WATER PIPE WORKS					
ITEM	**DESCRIPTION**	**UNIT**	**QUANT-ITY**	**RATE**	**AMOUNT**
6.1	Excavate, backfill and compact a 600mm by 300mm X 300 Meters trench to make way or as a preparation for lying of a water supply pipe. Excavated material to be put aside for later use as bedding and for backfilling. Complete installation including all accessories.	m^3	54		
6.2	Provision for Excavate, backfill, compact a cable trench of 300mm (Depth) x 300mm (Width) x 200m on soft soil base.	m^3	23		
	Total Bill No.5 Carried forward to summary page				

BILL NO 7: PUMP INSTALLATION AND WATER PIPING RETICULATION					
ITEM	**DESCRIPTION**	**UNIT**	**QUANT-ITY**	**RATE**	**AMOUNT**
7.1	Supply and Install 32mm diameter pressure HDPE class 10 water pipe through the trenching and complete installation including all pipe fittings. Pipe to be SABS approved.	m	250		
7.2	Supply and Install 50mm diameter pressure HDPE class 10 water pipe from pump outlet to the borehole sanitary seal complete with all pipe fittings. Pipe to be SABS approved.	m	200		
7.3	Supply and Install 15mm diameter pressure HDPE class 10 water pipe from pump outlet to the borehole sanitary seal complete with all pipe fittings. Pipe to be SABS approved.	m	200		
7.4	Supply and install a 4mm, 3 - core Electrical cable. Complete installation including all accessories	m	250		
7.5	Supply and install a 1,1Kw SVM (Similar/Equivalent or better) Submersible Borehole Pump with a performance flow rate from 30L/min to 400L/min. Head up to 290 meters, Stainless steel motor adaptor and discharge head, Polycarbonate impellers and a Stainless – steel bowls. Complete Installation including dipper tube, Adaptors, rope, connection fittings, electrical glands and all accessories	Sum	1		
7.6	Supply and install a 1.1Kw Motor for Borehole Applications. Complete Installation including all accessories	No.	1		
7.7	Supply and install a 1.1Kw 220 V single phase Automatic Electrical Control Box with but not limited to Start-stop manual control switches, Voltage Measurement, Current AMP Measurement, Start Capacitor, Potential Voltage Relay, Overload, Red &Green lights indicators. Complete Installation	No.	1		
7.8	Supply and install a 450mm x 190mm Pole mount fiberglass Junction Box with a pad lockable opening door, complete with mounting brackets and inside equipment mounting wooden backboard and mounting pole fixed on the ground.	item	1		
	BILL NO.7 Carried forward to summary page				

BILL NO. 8 WATER STORAGE					
ITEM	**DESCRIPTION**	**UNIT**	**QUANT-ITY**	**RATE**	**AMOUNT**
8.1	Supply and installation of a borehole Reverse osmosis water treatment plant with pretreatment setup. Complete with a 12 months guarantee including replacement filters and cartridges enough for a period of 12 months.	Sum	1		
8.2	Supply and install elevated 10 000L JOJO TANK OR SIMILAR/BETTER VERTICAL KHAKHI BROWN Plastic Water Tank suitable for outdoor use. Tank to be SABS approved. Complete installation and all accessories including bricked tank stand to be constructed to DPW&I specification	Sum	1		
	BILL NO.8 Carried forward to summary page				

SUMMARY OF SCHEDULES

EXPLORATION AND INSTALLATION OF BOREHOLE AND BACKUP TANK FOR WHITTLESEA DEPOT.

BILL	DESCRIPTION	AMOUNT
No. 1	PRELIMINARIES AND GENERAL	
No. 2	OCCUPATIONAL HEALTH AND SAFETY	
No. 3	SITING OF GROUND WATER BOREHOLE POSITION	
No. 4	BOREHOLE DRILLING AND CONSTRUCTION	
No. 5	PUMP TEST AND LABORATORY WATER SAMPLING	
No. 6	EARTHWORKS AND EXCAVATION FOR WATER PIPE WORKS	
No. 7	PUMP INSTALLATION AND WATER PIPING RETICULATION	
No. 8	WATER STORAGE	
SUB TOTAL 1:		
ADD CONTINGENCY 10%		
SUB TOTAL 2:		
ADD VAT 15%		
TOTAL CARRIED FORWARD TO FORM OF OFFER		

PART C3: SCOPE OF WORK

C3.1 **Scope of Works**

C3.2 **Construction**

C3.3 **Borehole Specification**

C3.4 **Health and Safety Specification**

C3.5 **HIV and AIDS Specification**

C3.1 SCOPE OF WORKS

Project title:	**EXPLORATION AND INSTALLATION OF BOREHOLE AND BACKUP TANK FOR WHITTLESEA DEPOT.**
Tender No:	**CHR5-22/23-0015**

C3.1 Description of the Works

C3.1.1 General

The services to be rendered under this Contract include the drilling, insertion of uPVC casing and screens, blow yield testing and sampling of the boreholes in Whittlesea in the Enoch Mgijima Local Municipality, Chris Hani Region. The final depth of these boreholes is not expected to be deeper than 200 m.

C3.1.2 Scope of Works

The services to be rendered under this Contract include the Hydrogeological Study and reporting, drilling, insertion of steel casing, uPVC casing, wire-wrapped stainless-steel screens, blow yield testing, water quality analysis and installation of a motor driven submersible pump in Whittlesea in the Enoch Mgijima Local Municipality, Chris Hani Region. The final depth of these boreholes is not expected to be deeper than 200 m.

C3.1.3 Description of the site and access

The drilling site is located Dongwe near (1 km radius) from the Hewu Provincial Hospital access road.

The topography is rugged with good access to the drill site with dirt tracks. Access to the site is along off an asphalt road. There will be minimal to none clearing necessary during establishment.

C3.2 Construction

Project title:	**EXPLORATION AND INSTALLATION OF BOREHOLE AND BACKUP TANK FOR WHITTLESEA DEPOT.**
Tender No:	**CHR5-22/23-0015**

C3.2 Construction

C3.2.1 Standardised Specifications

SANS 1200 Standard Specifications and the Standard and Particular Specifications are applicable to this contract. It shall however be noted that reference is made in certain of the specifications to other standardised specifications which may or may not be included in this document. Where such specifications are not included, they shall however be deemed to be included in the Contract documents.

C3.2.2 Particular Specifications to Health and Safety, Environmental and Code of Conduct

The following particular specifications shall apply to this contract and are Annexed to this Contract

Health and Safety Specifications for Public Works and Infrastructure
Environmental Management Plan
Drawings

C3.4.3 Technical Scope and Extent of Work

The work to be carried out by the Bidder (service providers) under this contract is mainly comprised of the following:

a. The engagement of local municipality for the specific areas/spots, as will be identified through the geo-hydrological study.

b. Installation of the borehole (Drilling, equipping, testing as per specifications).

c. Work closely with the teams appointed by DPW&I that are will be installing water tanks in the same site.

d. The liaison with relevant local municipality for confirmation of areas.

e. Provide construction supervision and monitoring of the respective site

f. The successful completion and finalising of project(s).

g. Submission of a Completion reports with geographic locations.

h. **Geohydrological Setting:** The geological conditions encountered cannot be guaranteed, and the contractor is required to have equipment on site to cope with situations typical of the given geo-hydrological environment.

i. **Access:** It is the responsibility of the bidder to ensure they are capable of getting their equipment to the point of need.

j. **Environmental & OHS Compliance:** The appointed contractor will be required to adhere to an Environmental Management Plan (EMP), as Occupational Health and Safety specifications as set out in the OHS act (Act 85 of 1993). It is expected of him to work as neatly as reasonably possible. Failure to adhere to the EMP and OHS Specifications could result in immediate suspension of the project with penalties until such time that appropriate corrective action is implemented.

k. **Scheduling:** Drilling is to commence immediately after receiving written acceptance of the bid, but the exact starting date is to be decided on by the project manager in consultation with all parties.

l. Borehole Specifications:

i. One boreholes is to be drilled to an expected depth of 200m. The final drilling depth will depend on geological conditions encountered, the yield of the borehole and will be set by the project geo-hydrologist during drilling.

ii. The borehole is to be drilled to a minimum diameter of 165 mm.

iii. In addition to any steel casing, the borehole is to be fitted with 18 m of class 12 PVC casing.

iv. It is not expected that the borehole will have to be completed with PVC casing and screens. If conditions necessitate this, a decision will be made in the field. The rates for supplying and installing 125 / 144 mm PVC casing and screen must be supplied with the quote.

v. If uPVC casing and screens are required, then the following specifications should be met:

- Flush fit threaded screens and casing of sufficient class are to be used, and no screws or pop-rivets may protrude through the casing. An end cap is to be fitted to the deepest length of casing.
- The screens are to have at least 10% open area on the inside wall of the casing, and a slot width of between 1.0 and 2.0 mm.
- Every second length of casing and screen is to be fitted with a centraliser to ensure that the casing is positioned in the centre of the borehole.
- The annulus between the boreholes and screens are to be filled with a gravel pack with a minimum diameter of 3 mm.
- Boreholes are to be drilled straight and as vertical as is practically possible. On completion of drilling and installation of the screens and casing, the boreholes are to be air flushed for one hour such that all drilling fluids and rock debris are removed.

m. **Data Collection and Record Keeping:** The driller is to perform the following tasks during the contract:

- Collect drilling samples after every meter of drilling for later inspection.
- The samples are to be placed in clear plastic bags.
- Each bag is to be clearly marked with the borehole number and the sample depth.
- Samples must be set out in an orderly fashion, composed of rows of 12 samples each.
- Penetration rates per meter must be recorded.
- The blow yield of the borehole is to be measured after each water strike and 15 minutes prior to the completion of borehole development.
- The project geo-hydrologist may wish to collect a groundwater sample prior to the completion of borehole development – he must hence be informed prior to completion of borehole development.
- The contractor shall maintain accurate drilling records for each borehole, including start and finish dates, depth of water strikes, penetration rates per meter, and complete borehole logs. The complete and accurate borehole log is to be submitted to the project geo-hydrologist.

- No payment will be considered unless all data has been submitted to the project geo-hydrologist.

n. **Contractual Requirements:** The work shall be conducted in accordance with the norms and standards of the drilling industry in South Africa. Guidance in this regard is provided in "Minimum Standards and Guidelines for Groundwater Resource Development for the Community Water Supply and Sanitation Programme" (DWAF, 1997) and "South African National Standard 10299-2:2003 (SANS, 2003)".
The contractor shall provide all labour, transport, plant, tools, materials and appurtenances, and shall perform all work necessary to satisfactorily construct and complete the work.

The contractor is expected to ensure the safe operation of the drill rig and ensure the safety of his staff and the environment; and agrees that he cannot hold the project geo-hydrologist or his client responsible for any accident or injury that occur during the execution of this tender.

The contractor is to ensure compliance with all safety legislations and requirements.

Access to site need to be arranged with the Local Municipality.

By submitting a tender, the contractor acknowledges that they have sufficient Professional Indemnity and Public Liability insurance to cover any eventually that may result from any negligence, omission or error by them during the contract.

The contractor will be responsible for any damage caused to the terrain. All damage is to be repaired before final contract payment will be made.

The contractor will be responsible for removal of all rubble and rubbish resulting from the drilling project and is required to leave the site in the same state as when they arrived.

Failure to comply with agreed dates and unreasonable delays resulting from equipment failure and / or waiting for supplies may lead to a penalty of R 2 500 per day.

The Employer is not obliged to approve nor pay for any boreholes not completed to specification.

o. **Pricing and Payment:** The costing for project is set-out in the pricing schedules.

p. The Contractor will be responsible for the following:

a) Appointment of a geo-hydrologist to indicate the placement of the borehole.

b) The monitoring & supervision of the drilling process

C3.3 BOREHOLE SPECIFICATION

Project title:	**EXPLORATION AND INSTALLATION OF BOREHOLE AND BACKUP TANK FOR WHITTLESEA DEPOT.**
Tender No:	**CHR5-22/23-0015**

SITING, DRILLING AND TESTING OF BOREHOLES FOR WATER

STANDARD SPECIFICATION

The standard specifications on which this contract is based are the SANS Standardised Specifications for Civil Engineering Works.

The following SANS specifications are also referred to in this document and the Contractor is advised to obtain them from Standards South Africa (a division of SABS) in Pretoria.

SABS 1200 AA : General (Small Works)
SABS 1200 C : Site Clearance
SABS 1200 GA : Concrete (Small Works)
SABS 1200 GB : Concrete (Ordinary Buildings)

A bidder should get his own copies of the above documentation.

The following SANS specification are also referred to in this document and the Contractor is advised to obtain them from Standards South Africa (a division of SABS) in Pretoria.

SANS 10396: 2003: Implementing Preferential Construction Procurement Policies using Targeted Procurement Procedures

SANS 1914-1to 6 (2002): Targeted Construction Procurement

SANS 1921 – 1 (2004): Construction and Management Requirements for Works Contracts Part 1: General Engineering and Construction Works

SITING, DRILLING AND TESTING OF BOREHOLES FOR WATER

PROJECT SPECIFICATION

STATUS

The Project Specification, consisting of two parts, forms an integral part of the contract and supplements the Standard Specifications.

Part A contains a general description of the works, the site and the requirements to be met. Part B contains variations, amendments and additions to the Standardized Specifications and, if applicable, the Particular Specifications.

In the event of any discrepancy between a part or parts of the Standardized or Particular Specifications and the Project Specification, the Project Specification shall take precedence. In the event of a discrepancy between the Specifications, (including the Project Specifications) and the drawings and / or the Bill of Quantities, the discrepancy shall be resolved by the Engineer before the execution of the work under the relevant item.

SITING, DRILLING AND TESTING OF BOREHOLES FOR WATER

GENERAL

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SITING, DRILLING AND TESTING OF BOREHOLES FOR WATER

GENERAL

PART: A

1. GENERAL REQUIREMENTS

1.1. Project description

The Project description will be issued during the stage with the request to give quotations for a specific project. The project may consist of some or all of the following activities:

a) Siting of boreholes.
b) Drilling of boreholes
c) Rehabilitation of existing boreholes
d) Development of production boreholes
e) Test pumping of boreholes

2. DESCRIPTIONS OF THE SITE AND ACCESS

2.2. Location of site

The Location of the site will be issued during the stage with the request to give quotations for a specific project.

2.3. Access to site

Details of access to the site will be issued during the stage with the request to give quotations for a specific project. The access to sites will differ from easy access to very difficult that requires 4 x 4 vehicles and 6 x 6 drilling rigs.

3. DETAILS OF THE WORKS

3.1 Brief description of works

A brief detail of the works for which this specification is applicable will be issued during the stage with the request to give quotations for a specific project.

3.2. Project Approach

The successful Bidder will be responsible for the full spectrum of supply, delivery, setting out, construction, quality control and defects attendance services. The Employer will appoint an Engineer (Internal or a Consultant) to monitor construction progress and quality. Regular progress payments, based on work actually performed at the Bidded rates, are envisaged. A defects liability period of 12 months will be applicable on this project.

4. CONSTRUCTION PROGRAMME

4.1. General

The submission of a construction programme as stated per Clause 5.6 of the General Conditions of Contract is compulsory.

- Before any work is to be commenced on the site (within a period as stated in Clause 5.6.1

of the General Conditions of Contract), the Contractor must submit a detailed project programme for the construction of the Works to the Engineer for his approval.

In preparation of the construction programme the Contractor must liaise with the Engineer and the programme must take into account the coordination of all activities. The programme must consist of a detailed schedule or block diagram covering all aspects of the Works and the planned time thereof must, with the Contract Period as time basis, be shown.

Rainfall conditions will be taken as abnormal when the average rainfall, as shown in Clause PS 8, is exceeded and the contractor must then apply in writing for extension of the contract period using Clause 10.1 of the Conditions of Contract.

The Contractor shall submit to the Engineer a realistic, detailed programme not later than 14 days after receipt of the Letter of Acceptance. The programme shall be in bar-chart format showing in detail how the Contractor proposes to complete the work covered by this contract by the Due Completion Date.

The following details must be stated:

i. The quantity of work applicable to each bar item as well as the rate at which the work will be completed.
ii. A budget of the value of completed work, month by month, for the full contract period.
iii. The Contractor's plant commitment on the contract for every fortnight.
iv. The critical path.

The programme shall be kept up to date. If a Contractor fails to maintain progress in terms of the programme, he shall produce a revised programme showing the modifications to the original programme necessary to ensure completion of the Works before the Due Completion Date.

The approval of any programme by the Engineer shall have no contractual significance, other than satisfying the Engineer that the Work is carried out according to such programme and that the Contractor undertakes to carry out the work in accordance with the programme. The Engineer will have the right to instruct the Contractor to revise the programme if necessitated by circumstances.

4.2. Time for Completion

The maximum time allowed for the completion of the contract will be determined during the stage with the request to give quotations for a specific project (excluding special non-working days and the year-end break) from the Commencement Date.

5. SITE FACILITIES AVAILABLE

5.1. Water Supply

The Contractor must make his own arrangements for provision of fresh water on site for domestic and construction purposes.

The rates Bidded for the relevant items in the Preliminary and General Section of the schedule shall include all costs for the establishment and maintenance of water supply to the works and the Contractor shall make his own arrangements for the possible conveyance and storage of water if necessary.

5.2. Power Supply

The Contractor must make his own arrangements for the provision of his own electrical requirements on site.

The rates Bidded for the relevant items in the Preliminary and General Section of the schedule shall include all costs for the establishment and maintenance of a power supply to the works as required for construction purposes.

6. FACILITIES REQUIRED ON SITE

6.1. Facilities for the Engineer

No site office for the Engineer is required.

6.2. Facilities for the Contractor

Site Establishment

The Contractor is responsible to provide a suitable site for his camp and to provide accommodation for his personnel and labourers. If the Employer can make any specific site available to the Contractor, such site will be pointed out to the Contractor.

The chosen site shall be subject to the approval of the Engineer and the Project Steering Committee (PSC). Possible locations for a campsite shall be pointed out at the Site inspection. The Contractor shall conform to all local authority, environmental and industrial regulations.

The Contractor shall provide security watchmen for the contract as he deems fit at no extra cost for the Employer. The Contractor must ensure that all his employees as well as the employees of his subcontractors are able to identify themselves as members of the construction team.

Ablution and Sanitary Facilities

The Contractor shall erect and maintain on the site proper ablution facilities. The Contractor shall service and maintain the facilities in a clean and hygienic state for the duration of the contract period and on completion of the works remove it from the site.

6.3. Laboratory Facilities

The contractor shall provide Laboratory facilities at an SABS accredited laboratory to conduct tests as required.

6.4. Construction Notice Board (Name Board)

No Construction Notice Board is required for this contract.

6.5. Housing for the Engineer and/or his Representative

No housing is required for the Engineer or his Representative.

6.6. Telephone Facilities

Telephone and facsimile facilities are not needed on the site.

7. MANAGEMENT AND DISPOSAL OF WATER

The Contractor shall pay special attention to the management and disposal of water and storm water on the site. It is essential that all completed works or parts thereof are kept dry and properly

drained. Claims for delay and for repair of damage caused to the works as a result of the Contractor's failure to properly manage rain and surface water, will not be considered.

8. RAINFALL FIGURES

The following figures are applicable for Clause 5.12.1 of the Special Conditions of Contract.
INFORMATION SOURCE: WRC Report 1994

(Relevant information will be issued during the stage with the request to give quotations for a specific project.)

Rainfall station:					
Rainfall station:					
Period:					
Month	**Nn**	**Rn**	**Month**	**Nn**	**Rn**
January February March April May June			July August September October November December		
Annual average:					

Nn = Average number of days on which a rainfall of 10 mm or more has been recorded.
Rn = Average monthly rainfall in mm

Extensions of time in respect of Clause 10.1 in the General Conditions of Contract for Construction Works (2010) in respect of abnormal rainfall shall be calculated using the following formula for each calendar month or part thereof:

$$V = (Nw - Nn) + \frac{(Rw - Rn)}{X}$$

Where:

V = Extension of time in calendar days in respect of the calendar month under consideration.
Nw = Actual number of days during the calendar month on which a rainfall of 10 mm or more has been recorded.
Nn = Average number of days in the relevant calendar month, as derived from existing rainfall records, on which a rainfall of 10mm or more has been recorded for the calendar month.
Rw = Actual average rainfall in mm recorded for the calendar month under consideration.
Rn = Average rainfall in mm for the calendar month as derived from existing rainfall records as stated in the Site Information.
X = 20mm

For purposes of the Contract Nn, Rn and Nn shall have those values assigned to them in the table above based on figures from the WRC report 1994.

If V is negative and its absolute value exceeds Nn, then V shall be taken as equal to minus Nn.

The total extension of time shall be the algebraic sum of all monthly totals for the period under consideration, but if the total is negative the time for completion shall not be reduced due to subnormal rainfall. Extensions of time for part of a month shall be calculated using pro rata values of Nn and Rn.

This formula does not take account flood damage which could cause further or concurrent delays and will be treated separately as far as extension of time is concerned.

The factor (Nw – Nn) shall be considered to represent a fair allowance for variations from the average in the number of days during which rainfall exceeds 10 mm. The factor (Rw-Rn) shall be considered to represent a fair allowance for variations from the average in the number of days during which the rainfall did not exceed 10 mm but wet conditions prevented or disrupted work.

For the purpose of applying the formula, accurate rain gauging shall be taken at a suitable point on the Site and the Contractor shall at his own expense, take all necessary precautions to ensure that rain gauges cannot be interfered with by unauthorized persons.

9. SECURITY CLEARANCE OF PERSONNEL

Bidders to note that the Limpopo Department of Agriculture and Rural Development may require that Security Clearance investigations be conducted on any number of the Bidder's personnel.

If so required by the Limpopo Dept of Agriculture, the Bidder must remove personnel as indicated immediately and ensure that they have no access to the works or documentation or any other information pertaining the site.

The Employer shall not be liable for any cost concerning the removal of personnel or the effect thereof on the execution of the work.

10. HEALTH AND SAFETY

10.1. General statement

It is a requirement of this contract that the Contractor shall provide a safe and healthy working environment and to direct all his activities in such a manner that his employees and any other persons, who may be directly affected by his activities, are not exposed to hazards to their health and safety. To this end the Contractor shall assume full responsibility to conform to all the provisions of the Occupational Health and Safety Act (OHSA) No 85 and Amendment Act No 181 of 1993, and the OHSA 1993 Construction Regulations 2003 issued on 18 July 2003 by the Department of Labour.

For the purpose of this contract the Contractor is required to confirm his status as mandatory and employer in his own right for the execution of the contract by entering into an agreement with the Employer in terms of the Occupational Health and Safety Act in the form as included in section C1.5.

10.2. Health and Safety Specifications and Plans

(a) Employer's Health and Safety Specification

The Employer's Health and Safety Specification is included in Section C3.3, Part E of the Bid documents as part of the Particular Specifications.

(b) Bidder's Health and Safety Plan

The Bidder shall submit with the Bid his own documented Health and Safety Plan he proposes to be implement for the execution of the work under the contract. The Health and Safety Plan must at least cover the following:

(i) a proper risk assessment of the works, risk items, work methods and procedures in terms of Regulations 7 to 28;
(ii) pro-active identification of potential hazards and unsafe working conditions;
(iii) provision of a safe working environment and equipment;
(iv) statements of methods to ensure the health and safety of subcontractors, employees and visitors to the site, including safety training in hazards and risk areas (Regulation 5);
(v) monitoring health and safety on the site of works on a regular basis, and keeping of records and registers as provided for in the Construction Regulations;
(vi) details of the Construction Supervisor, the Construction Safety Officers and other competent persons he intends to appoint for the construction works in terms of Regulation 6 and other applicable regulations; and
(vii) details of methods to ensure that his Health and Safety Plan is carried out effectively in accordance with the Construction Regulations 2003.

The Contractor's Health and Safety Plan will be subject to approval by the Employer, or amendment if necessary, before commencement of construction work. The Contractor will not be allowed to commence work, or his work will be suspended if he had already commenced work, before he has obtained the Employer's written approval of his Health and Safety Plan.

Time lost due to delayed commencement or suspension of the work as a result of the Contractor's failure to obtain approval for his safety plan, shall not be used as a reason to claim for extension of time or standing time and related costs

10.3. Cost of compliance with the OHSA Construction Regulations

The rates and prices Bidded by the Contractor shall be deemed to include all costs for conforming to the requirements of the Act, the Construction Regulations and the Employer's Health and Safety Specification as applicable to this contract.

Should the Contractor fail to comply with the provisions of the Construction Regulations, he will be liable for penalties as provided in the Construction Regulations and in the Employer's Health and Safety Specification.

11. SUBCONTRACTORS

The Employer shall have the right to cede any sub-contract under this contract to a pre-approved subcontractor, in accordance with the provisions of Clause 4.4.3 of the General Conditions of Contract.

12. DELAY IN COMPLETION

The Contractor shall organise the Works in such a manner that no delays occur. Delay due to faulty organisation or lack or shortage of materials or labour or co-operation with other parties or to any other cause within the control of the Contractor will not be countenanced and full power is reserved by the Engineer to order the Contractor to expedite the work should the work, in the opinion of the Engineer, not progress in a satisfactory way.

13. SUPPLY OF MATERIALS

All material to be used in the Works is to be supplied by the Contractor.

The Contractor shall ensure that the work is not delayed due to the lack of materials on Site, by placing orders for material required under this Contract as soon as possible. No extension of time will be allowed for any delay due to the supply of materials.

Although the quantities have been carefully calculated, it must be considered as approximate only and the Contractor, before ordering any materials, should check the quantities required. The bill of quantities is provisional.

14. EXECUTION OF THE WORKS

14.1. Inspection by the Engineer

No portion of the work shall be proceeded with until the Engineer or his representative has examined and approved the previous stage. If any work is covered or hidden from view before the Engineer or his representative has inspected the work, the Contractor shall at his own cost expose the covered or hidden work for inspection. The Contractor shall also be responsible for making good any work damaged during the uncovering.

15. EXISTING SERVICES

The Contractor shall make himself acquainted with the position of all existing services before any excavation or other work likely to affect the existing services is commenced.

The Contractor will be held responsible for any damage to known existing services caused by or arising out of his operations and any damage shall be made good at his own expense. Damage to unknown services shall be repaired as soon as possible and liability shall be determined on site when such damage should occur.

Two weeks prior to commencing construction activities in a particular area, the Contractor shall also diligently enquire of local landowners as to whether there are any other known services which have not been shown on the drawings but which may be affected by the construction activities in that area, and any such services shall be brought to the attention of the Engineer immediately. The contractor shall make provision in his programme for the location and/or shifting of services.

16. LABOUR INTENSIVE SPECIFICATION

16.1. Labour intensive competencies of supervisory and management staff

Contractors having a CIDB contractor grading designation of 1CE and higher shall only engage supervisory and management staff in labour intensive works who have either completed, or, are registered for training towards, the skills programme outlined in Table 1.

All site supervisory staff in the employ of the contractor must have completed, a skills programme for the NQF level 2 unit standards or NQF level 4 unit standards.

Table 1: Skills programme for supervisory and management staff

Personnel	**NQF level**	**Unit standard titles**	**Skills programme description**
Team leader / supervisor	2	Apply Labour Intensive Construction Systems and Techniques to Work Activities	This unit standard must be completed, **and**
		Use Labour Intensive Construction Methods to Construct and Maintain Roads and Storm water Drainage	} any one of these 3 unit standards
		Use Labour Intensive Construction Methods to Construct and Maintain Water and Sanitation Services	
		Use Labour Intensive Construction Methods to Construct, Repair and Maintain Structures	
Foreman/ supervisor	4	Implement labour Intensive Construction Systems and Techniques	This unit standard must be completed, **and**
		Use Labour Intensive Construction Methods to Construct and Maintain Roads and Storm water Drainage	} any one of these 3 unit standards
		Use Labour Intensive Construction Methods to Construct and Maintain Water and Sanitation Services	
		Use Labour Intensive Construction Methods to Construct, Repair and Maintain Structures	
Site Agent / Manager (i.e. the contractor's most senior representative that is resident on the site)	5	Manage Labour Intensive Construction Processes	Skills Programme against this single unit standard

17. Employment of unskilled and semi-skilled workers in labour-intensive works

17.1.1. Requirements for the sourcing and engagement of labour.

Unskilled and semi-skilled labour required for the execution of all labour-intensive works shall be engaged strictly in accordance with prevailing legislation and SANS 1914-5, Participation of Targeted Labour.

The rate of pay set for a day task is 90% of the statutory daily wage applicable for the areas. Tasks established by the contractor must be such that:

a) the average worker completes 5 tasks per week in 40 hours or less; and
b) the weakest worker completes 5 tasks per week in 55 hours or less.

The contractor must revise the time taken to complete a task whenever it is established that the time taken to complete a weekly task is not within the requirements of 5.2.1.3.

The Contractor shall, through all available community structures, inform the local community of the labour-intensive works and the employment opportunities presented thereby. Preference must be given to people with previous practical experience in construction and / or who come from households:

a) where the head of the household has less than a primary school education;
b) that has less than one full time person earning an income;
c) where subsistence agriculture is the source of income.
d) those who are not in receipt of any social security pension income

The Contractor shall endeavour to ensure that the expenditure on the employment of temporary workers is in the following proportions:

a) 60 % women;
b) 20% youth who are between the ages of 18 and 25; and
c) 2% on persons with disabilities.

17.1.2. Specific provisions pertaining to SANS 1914-5 Training of targeted labour

a) The contractor shall provide all the necessary on-the-job training to targeted labour to enable such labour to master the basic work techniques required to undertake the work in accordance with the requirements of the contract in a manner that does not compromise worker health and safety.

b) The cost of the formal training of targeted labour will be funded by the provincial office of the Department of Labour. This training should take place as close to the project site as practically possible. The contractor, must access this training by informing the relevant provincial office of the Department of Labour in writing, within 14 days of being awarded the contract, of the likely number of persons that will undergo training and when such training is required. The employer must be furnished with a copy of this request.

c) The contractor shall be responsible for scheduling the training of workers and shall take all reasonable steps to ensure that each beneficiary is provided with a minimum of six (6) days of formal training if he/she is employed for 3 months or less and a minimum of ten (10) days if he she is employed for 4 months or more.

d) The contractor shall do nothing to dissuade targeted labour from participating in training programmes.

e) An allowance equal to 100% of the task rate or daily rate shall be paid by the contractor to workers who attend formal training, in terms of (d) above.

f) Proof of compliance with the requirements of (b) to (e) must be provided by the Contractor to the Employer prior to submission of the final payment certificate.

SITING, DRILLING AND TESTING OF BOREHOLES FOR WATER

PART B: AMENDMENTS TO THE STANDARD SPECIFICATIONS

1. PROJECT SPECIFICATIONS RELATING TO THE STANDARD SPECIFICATIONS AND OTHER ADDITIONAL SPECIFICATIONS

In certain clauses in the standard, standardised and particular specifications, allowance is made for a choice to be specified in the project specifications between alternative materials or methods of construction, and for additional requirements to be specified to suit a particular contract. Details of such alternative or additional requirements applicable to this contract are contained in this part of the project specifications. It also contains the necessary additional specifications required for this particular contract.

VARIATIONS TO REQUIREMENTS OF SPECIFICATIONS LISTED IN C3.1

PSAA SABS 1200 AA : GENERAL (SMALL WORKS)

None

PSC SABC 1200 C: SITE CLEARANCE

None

PSGA: SABS 1200 GA: CONCRETE (SMALL WORKS)

PSGA 5.1.2: Welding

Welding of reinforcement is permitted.

PSGA 5.4.1.6 Ready mixed concrete

Use of ready-mixed concrete is permitted and the manufacturer's quality control system will be acceptable.

PSGA 5.4.7 Concrete Curing

Where suitable water for curing of the concrete is not readily available, the contractor is to allow for the use of an approved curing compound.

C3.3 PARTICULAR SPECIFICATIONS

PART H: Drilling of Boreholes
PART J: Test Pumping of Boreholes

PART H: DRILLING OF BOREHOLES

PROJECT SPECIFICATIONS

1. Application and Status

These Project Specifications describe the Works to be executed by the Contractor under the Contract and set out the requirements for the Works as well as the minimum standards to be achieved by the Contractor.

These Project Specifications are supplementary to the Standard Specifications for Drilling of Boreholes (hereinafter referred to as the "Standard Specifications") and set out variations, additions and omissions to the Standard Specifications and as such, shall be construed and interpreted in conjunction with such Standard Specifications.

These Project Specifications set out the variations, additions and omissions which shall be applicable in the Contract to the Standard Specifications and should there exist any discrepancy, conflict or inconsistency between any part of the Standard Specifications and any part of these Project Specifications, the provisions of these Project Specifications shall take precedence and prevail in the Contract.

2. Interpretation

Wherever reference is made within the Standard Specifications and/or these Project Specifications to the "Geohydrological Consultant" and/or the "Geohydrologist" and/or the "Consultant", it shall be deemed to mean the "Engineer" as defined in the Conditions of Contract.

Wherever reference (if any) is made within the Standard Specifications and/or these Project Specifications to the "Implementing Agent", the "Department of Public Works & Infrastructure and Infrastructure", "DPW&I" or any party not being the "Employer", the Contractor, the Engineer, the Geohydrological Consultant or the Consultant, it shall be deemed to mean the Employer.

3. Purpose and Scope

The Contract is for the drilling of a borehole for The Department of Public Works & Infrastructure and Infrastructure Depot in Whittlesea and all Works associated therewith in accordance with:

(1) the Information Provided to the Bidder as per Section 1 of this document,

(2) any further details/instructions as may be ordered by the Employer or the Hydrogeological Consultant.

The drilling services are required for a period of three years from the date of award and no specific quantity of work has been identified. The Contract is based on a Schedule of Rates with payment to be made on the basis of measured quantities and the bided rates.

The Scope of Work to be actually executed by the Contractor will be as decided by the Engineer in consultation with the Employer, as provided for in the Conditions of Contract. The work to be carried out during the currency of the contract may be given as separate batches (referred to in the Conditions of Contract as "Works Segments"). Each Works Segment to be executed by the Contractor will, from time to time during the currency of the Contract, be detailed in a written instruction by the Consulting Hydrogeologist as provided for in the Conditions of Contract.

4. Drilling Equipment and Materials

Further to the provisions of the Conditions of Contract, the Contractor shall furnish all the particulars requested in Section 3-0 (sub-section 5-0) of this document. The capacity shall be sufficient to cope with the work as specified for the project. It shall be kept at all times in full working order and good repair. The Hydrogeological Consultant will have the right to inspect the equipment to be used prior to the commencement of the Works. If the Hydrogeological Consultant considers that the plant in use on the site of the Works is in any way inefficient or inadequate in capacity, he shall have the right to call upon the Contractor to put such equipment in order within seven days or, alternatively, to remove such plant and replace it with other plant or equipment which he considers necessary to meet the requirements of the Contract.

In the event of breach by the Contractor of this requirement, the Hydrogeological Consultant reserves the right to recommend to the Client to terminate the Contract in accordance with the provisions of Sub-Clause 58.(1)(b)(vi) of the Conditions of Contract.

Equipment brought onto the site may not be removed there from without the written permission of the Hydrogeological Consultant. It will be the responsibility of the Contractor to arrive on site with all staff, equipment, materials and chemicals required to complete the work without interruption.

Where existing equipped boreholes are to be rehabilitated, the Contractor must provide suitable plant to enable the installed pumping equipment to be removed and reinstalled. This includes the removal and reinstallation of hand pumps, wind pumps and motorised pumps. Rehabilitation of existing boreholes may include the recovery of existing pumping equipment that was previously dropped into a borehole.

5. Borehole Construction -

Two borehole design options are shown in Drawings 2 and 3 in Section 6 of this document. The decision as to which of these designs or any other suitable and appropriate design to use will be made by the Hydrogeological Consultant.

Any variations from the drilling diameters specified in the Standard Specifications must be acceptable to the Hydrogeological Consultant.

The Contractor shall not use drilling media which in any way might compromise the integrity of the aquifer and/or the yield of the borehole. The Contractor must provide suitable and adequate tanks in which to mix and hold all drilling fluid.

Borehole straightness and verticality shall be judged according to the criteria set out in the Standard Specifications and Drawing 5 in Section 6 of this document.

The backfilling of boreholes will be undertaken in accordance with the criteria set out in the Standard Specifications and as illustrated in Drawings 7 in Section 6 of this document.

Formation stabiliser shall be used in accordance with the discussion presented in Standard Specifications and as illustrated in Drawing 3 in Section 6 of this document.

Each successful borehole shall be furnished with a concrete collar as described in the Standard Specifications and as illustrated in Drawing 6 in Section 6 of this document.

Unsuccessful and abandoned boreholes and lost boreholes shall be treated in the manner set out in these subsections.

Each successful borehole shall be furnished with a sanitary seal as described in the Standard Specifications and as illustrated in Drawings 2 and 3 in Section 6 of this document. The purpose of a sanitary seal is to prevent the ingress of potentially contaminated surface water into the borehole via the annular space between the borehole sidewall and the outside of the casing. Such sanitary seal shall be constructed in-the presence of the Geohydrologist or his representative. The seal shall extend to a minimum depth of 5 m below surface, and will entail the drilling of a 305 mm diameter hole, in which a 254 mm ID steel casing (TYPE 1 sanitary seal) or 215 mm ID steel casing (TYPE 2 sanitary seal) will be placed using centralisers at the bottom to ensure that the casing is placed in the centre of the hole. In exceptional cases the Engineer may decide to alter the drilling and casing diameters, but will not exceed the aforementioned diameters. Four equally spaced flat bars of appropriate size, welded to the sides of the casing can be used as centralisers. The seal must consist of Portland Cement (quick drying) mixed to slurry with bentonite and water, which is free of oil and organic matter. The bentonite and water should be thoroughly mixed prior to adding and mixing with cement. The Contractor is to use a suitable method in placing the sanitary seal to ensure complete filling of the void between the casing and borehole. Care should be taken not to leave any voids in the sanitary seal.

6. Data Recording and Reporting

Data must be recorded on the borehole log and penetration rate log provided in Section 6 of this document. Penetration times per metre are to be recorded with a stopwatch, all water intersection depths and estimated yield, type of formation encountered as well as all details of both temporary and permanent casing installed in boreholes shall be recorded as a minimum requirement.

7. Down-the-hole Loss of Equipment

The data shall be recorded on the borehole log and penetration rate log provided in Section 6 of this document.

8. Rehabilitation of Existing Boreholes

Payment for additional casing inserted into the borehole shall be made as per the Schedule of Rates. This clause does not cover the return of the Contractor to a borehole previously drilled by the Contractor.

9. Cessation of Drilling Activities

The termination, at any stage, of drilling operations on a borehole shall rest with the Consultant.

10. Measurement and Payment

The Contractor appointed under this Contract is considered to be an expert in his field and is expected to organise and carry out the required work in an expert manner. Drilling problems encountered will be overcome entirely within the framework of the Specifications and the Schedule of Rates, and no claims for extra payments will be entertained for problems foreshadowed in the Specification or due to limitations imposed by the Specifications.

The measurement of and payment for all materials and work provided by the Contractor in the course of the project will be according to the criteria as set out and are applicable in respect of such as are variously specified in the Standard Specifications and hereunder:

10.1. Standing Time

This will cover periods when the Contractor's drilling rig and crew or, if more than one rig and crew are fielded, when all rigs and crews are idle waiting for decisions by the Consultant where those decisions or whose presence is required before the commencement or continuation of the work. Under no circumstances will standing time be payable for any delays other than those incurred by the Hydrogeological Consultant's decisions. Except only for abnormal weather conditions as provided for in Sub-Clause 47.(2) of the Conditions of Contract, no standing time will be payable due to inclement weather or prevention of access to a site by the Contractor or Hydrogeological Consultant due to inclement weather. Further, no standing time will be payable to the Contractor in respect of any periods where the Contractor is not engaged in the execution of the Works as a result of the Consultant having failed to issue an instruction to commence with the works of any Works Segment and there being no other Contract Works on which the Contractor is required to carry out work.

The Contractor must make provision for one-hour standing time per borehole to allow for the measurement of groundwater levels and the determination of optimum casing installation (plain and slotted). Since no separate payment will be made for standing time (up to 1 hour) resulting from these activities, the Contractor must allow for this.

10.2. Inter-hole Moves

Payment for inter-hole moves up to a distance of ten kilometres shall be made at the unit rate bided for in the Schedule of Rates. Inter-hole moves in excess of ten kilometres shall be remunerated for the first ten kilometres at the bided unit rate and, for each full kilometre thereafter, at the rate per kilometre bided in the Schedule of Rates.

10.3. Reaming of Boreholes

Where a borehole has previously been drilled to a smaller diameter than that required, the original borehole should be reamed to the required diameter. Reaming of a borehole to larger diameters may also be required for borehole construction purposes. Remuneration for this work shall be according to the rates bided in the Schedule of Rates.

10.4. Removal of Existing Pumping Equipment

This rate shall cover the removal of existing pumping equipment in a borehole to be rehabilitated and secure storage of removed existing equipment. Payment for removal up to an installed depth of 50 m shall be made at the unit rate bided for in the Schedule of Rates. Installed depths in excess of 50 m shall be remunerated for the first 50 m at the bided unit rate and, for each full metre thereafter, at the rate per metre bided in the Schedule of Rates.

The Contractor is solely responsible for the secure storage of removed equipment to prevent theft of existing equipment from site.

10.5. Re-installation of Existing Pumping Equipment

This rate shall cover the re-installation of existing pumping equipment in a borehole following rehabilitation of the borehole. Payment for installation up to a depth of 50 m shall be made at the unit rate bided for in the Schedule of Rates. Re-installation depths in excess of 50 m shall be remunerated for the first 50 m at the bided unit rate and, for each full metre thereafter, at the rate per metre bided in the Schedule of Rates. The existing pumping equipment shall be restored to

its working condition as encountered before removal unless the Contractor is instructed otherwise by the Hydrogeological Consultant.

10.6. Labour-based Methods to Prepare Access to Site

The use of labour-based methods required to prepare access to a site (bush clearing and/or limited road making) must be approved by the Hydrogeological Consultant. Labour required for such work must be employed from the local community with whom the number of man days required for the task is to be negotiated and finalised prior to gaining approval from the Hydrogeological Consultant. Contractors must always keep in mind that the minimum wages payable to labourers must at all times adhere to “Minimum Wage Legislation” for the particular area.

STANDARD SPECIFICATIONS FOR BOREHOLE DRILLING

1. Purpose and Scope

Simply stated, the purpose of this activity is to establish a means to access and tap groundwater resources.

This is most often provided by the drilling of a borehole. It is not sufficient for this facility to represent just another hole in the ground. It is vital that the borehole be constructed and completed to certain minimum standards in order to secure the long-term viability and serviceability of the installation. This component of the project is served jointly by the Hydrogeological Consultant and the Drilling Contractor. It is therefore expected of these parties to function as a team within the framework of their individual briefs as set out in their respective contract agreements with the Implementing Authority.

2. Approach and Responsibility

In general, it is required that the drilling of any borehole be approached with due diligence and care on the part of the appointed drilling contractor(s). Specifically, it is required that the drilling of each borehole be approached in a cost-effective manner to establish a water supply. In some instances, boreholes may be drilled for exploration and/or resource monitoring purposes. Under normal circumstances, the pre-drilling of a 165 mm diameter exploration borehole is drilled and the borehole is reamed to larger diameters for construction purposes. In leached/cavernous carbonate rock areas drilling normally commences with larger diameters, to limit reaming of boreholes and allow for telescope borehole construction.

The Drilling Contractor(s) will function under the direct supervision of the Hydrogeological Consultant. This by no means implies that the Drilling Contractor(s) is absolved from any responsibility. All drilling activities will, therefore, be approached through communication and discussion between the Hydrogeological Consultant and the contractor(s) with a view to developing the most suitable and mutually acceptable finished product serving the best interests of the project. The fact that the Drilling Contractor is also appointed for the skills which he can offer the project and is often able to provide, from experience, practical approaches and solutions to specific problems must be recognised and accepted by the Hydrogeological Consultant.

Failure by the contractor(s) to timeously render advice and input where required will be regarded as a dereliction of duty. This responsibility extends to informing the Hydrogeological Consultant of serious reservations regarding any aspect of the work. The contractor(s) will also be required to maintain the aesthetic appearance of the site during drilling operations, including keeping the site neat, tidy and free of litter. More importantly, the contractor must ensure that safety standards are met and that the work site is kept free, as far as is possible, from vehicular and pedestrian traffic and from interested bystanders and onlookers not involved with the project.

In essence, the final responsibility for the finished water supply borehole and all actions and activities leading up thereto must be carried jointly by the Hydrogeological Consultant of the Executive Agency and the appointed Drilling Contractor(s).

3. Techniques

The most common method employed for the sinking of a water supply borehole is that of rotary air percussion drilling employing a down-the-hole (DTH) hammer. This drilling technique is ideally suited to hard rock formations and therefore finds wide application in most of the geological

environments encountered in South Africa. Other techniques which will be applied depending on site-specific circumstances include:

(1) Odex drilling and
(2) cable tool percussion drilling.

Method (1) represent technically more sophisticated techniques, which find specific application in loose and unconsolidated materials.

Method (2) employs the familiar jumper rig, its most useful application being the cleaning and rehabilitation of existing boreholes.

In light of the above, the preferred drilling technique to be employed on community water supply projects is that of rotary air percussion.

4. Equipment and Materials

The equipment made available by the Drilling Contractor must be in good working order. It must also be maintained in good condition for the duration of the project. In order to achieve this, time should be set aside each week for the routine service and preventative maintenance of all equipment (subsection 5).

The drilling equipment must include a full air/foam pumping system. At the start of the project, the gauge diameter of the button drill bits to be employed

with the rotary air percussion drilling technique must conform closely to their manufactured gauge and must also possess all of their tungsten carbide buttons.

The Hydrogeological Consultant will discuss with the Drilling Contractor the retirement of a bit due to excessive wear or damage incurred during the course of the project.

Further, it is imperative that the equipment be of a suitable size and capacity to deal, on occasion, with:

(3) deep boreholes (up to 300 m),
(4) larger than average borehole diameters (up to 305 mm),
(5) large quantities of groundwater and
(6) potentially onerous drilling conditions.

Since this capability is provided in large measure by the air compressor, it is considered that a compressor having a capacity of at least 2400 kPa (24 bar) and a volume of at least 750 cfm is appropriate for most water borehole drilling applications and conditions using the rotary air percussion technique.

In order to maintain the straightness of a borehole, the Hydrogeological Consultant may insist that the Drilling Contractor employ at least an overshot sleeve (drill collar) fitted to the pneumatic DTH hammer.

Further precautions to ensure this aspect might include the use of a stabiliser rod immediately behind the bit/hammer/overshot combination. All materials to be used on the project should be new and meet project specifications.

This applies particularly to steel casing, which shall be:

(1) of the seam-welded type,
(2) round,
(3) straight,
(4) of uniform wall thickness and
(5) have bevelled edges.

Second-hand material such as steel casing recovered from an earlier borehole cannot even if it has been refurbished to acceptable conditions (refer to subsection 5.6f).

The Hydrogeological Consultant will have the right to reject, with motivation, any material (including casing) which is deemed inappropriate, substandard or otherwise unsuitable for the project.

5. Workmanship and Performance

The standard of workmanship of the Drilling Contractor will be subject to close scrutiny by the Hydrogeological Consultant. Many aspects thereof are of a subjective nature and not readily quantifiable.

Every attempt must, therefore, be made to render this beyond possible criticism. Judgment of the performance of the Drilling Contractor in the execution of assigned work is similarly of a subjective nature. Although it cannot be expected of the contractor to complete a specified number of boreholes in a given time period, it is reasonable to expect that “favourable progress” be made under normal circumstances and drilling conditions. An indication of what might be regarded as “favourable progress” is considered to fall in the range of 50 to 100 m of drilling advancement per day taking into consideration inter-hole moves and set-up time. Performance being related to efficiency and efficiency in turn being a function of, amongst other factors, the number of mechanical equipment breakdowns suffered by the contractor, it will be in the best interests of the contractor to set aside time for the routine preventative maintenance of equipment. If the contractor is inclined to work a 6 or 7-day week, it is preferred that maintenance activities be scheduled for the weekends. Such schedule must be communicated to the Hydrogeological Consultant. This party may insist that the Drilling Contractor does not start with the drilling of a borehole over a weekend. Although work- in-progress may be completed, the contractor shall under no circumstances vacate a site before the Hydrogeological Consultant has inspected the completed works and sanctioned the move to the next borehole.

6. Borehole Construction

The extremely diverse nature of subsurface conditions, sometimes over very short distances, renders it virtually impossible to address this aspect in great or specific detail. This factor also rules out standardisation in this regard. It is possible, however, to address certain basic borehole construction practices which will contribute to final acceptance of the successfully finished product.

a) Drilling Diameter

Drilling diameters will be 152 mm (6”), 165 mm (6,5”), 203 mm (8”), 254 mm (10”) and 305 mm (12”) for rotary air percussion drilling.

Odex drilling diameters will be 194 mm, 219 mm or 273 mm OD. Any variations must be acceptable to the Engineer.

The minimum final cased diameter of a successful community water supply borehole shall not be less than 152 mm nominal.

The contractor will be remunerated for drilling per linear metre of depth at the rate bided for each relevant drilling diameter employed as set out in the Schedule of Rates.

b) Steel Casing

Steel casing may either be used in a temporary manner or form a permanent part of the borehole infrastructure. Its

temporary use is indicated in instances where, for example, the borehole is unsuccessful or the need for it to remain in place becomes redundant. Under these circumstances it is also referred to as a pre-collar, surface casing, starter casing, outer casing or soil casing generally to be removed (recovered) on completion of drilling. The removal of temporary/starter casing to a depth of 5 m will not be a payable item under recovery of steel casing. It will be left in place where the Hydrogeological Consultant is of the opinion that the unsuccessful borehole should be secured to serve a long-term groundwater monitoring purpose. In such instances, additional provision must be made to protect the borehole against actions, which may compromise this function.

More commonly, however, this casing constitutes the final casing with which a successful borehole is equipped/constructed. Its proper installation, therefore, is mandatory. It is installed from surface through unstable, unconsolidated or fractured materials usually occurring in the near surface.

Under these circumstances, the function of steel casing includes one or more of:

(1) supporting unstable materials against collapse into the borehole during drilling,
(2) facilitating the installation or removal of other casing,
(3) minimizing the erosion and widening of the unstable upper portions of the borehole sidewall caused by the return flow established during drilling and/or the passage of drilling equipment/tools and
(4) facilitating the placement of a sanitary seal and/or gravel pack or formation stabilizer.
(5) The casing must conform to the specifications set out in subsection 5-4.

In order to ensure as far as is possible that the annular space between this casing and the borehole sidewall remains open for the later emplacement of a sanitary seal, the circumferential entrance to this space must be temporarily plugged.

Hessian sacking packed around and lightly tamped into the surface entrance to this annular space can be used for this purpose. In instances where steel casing needs to be driven through unstable horizons (generally at greater depths in a borehole), it will also be required that such casing be fitted with a casing shoe to protect the “mouth” of the casing from damage (subsection 5-6.c). Irrespective of the casing used to facilitate the drilling of the borehole, the final cased diameter of the finished product must be sufficient for the borehole to easily accept a borehole pump.

Since the outside diameter of the latter is generally in the order of 1 00 mm, it is required that the final cased diameter of the borehole be not less than 152 mm (6 in.) nominal where steel casing is used.

The Drilling Contractor will be remunerated for steel casing per linear metre thereof supplied, delivered and installed at the rate bided for each relevant casing diameter as set out in the Schedule of Rates.

c) Casing Shoe

This item is fitted (welded) to the bottom end (foot) of a casing string in order to protect the "mouth" of the casing from damage due to forcing the casing through unstable horizons. Its use is therefore only warranted (indeed mandatory) in instances where such conditions reveal themselves to require securement through the emplacement of casing.

The Drilling Contractor will be remunerated for each casing shoe supplied and used at the rate bided for each relevant shoe diameter as set out in the Schedule of Rates.

d) uPVC Casing

Also referred to as thermoplastic casing, the material generally comprises PVC (polyvinyl chloride) which, when treated to withstand ultraviolet radiation, is known as uPVC casing. Its application in the construction of community water supply boreholes is rather specific, being used mainly in instances where security against the collapse of a borehole sidewall is required and where steel casing does not already offer such security. In such instances, the casing is inserted the entire length of the borehole and will certainly be perforated for some portion of its length.

The diameter of this casing will also necessarily be smaller than that of the steel casing used which, in most instances, will have a nominal diameter of 165 mm. In order not to compromise too severely on the minimum nominal diameter requirement of 152 mm for successfully completed community water supply boreholes (subsection 5-6.b), the inside diameter of the uPVC casing shall not be less than 127 mm with a wall thickness of 6 mm. It is also common practice to leave the steel casing in place in order to provide protection for the uPVC casing. The decision to use uPVC casing in the final construction of a borehole shall be made by the Hydrogeological Consultant.

The Drilling Contractor will be remunerated for uPVC casing per linear metre thereof supplied and installed at the rate bided for each relevant casing diameter as set out in the Schedule of Rates.

e) Perforated Casing

Also referred to as slotted casing, this is used in instances where a casing string inserted into a borehole will extend across a water-bearing horizon.

The perforations or slots will allow the groundwater to enter the borehole. Perforations can be made in a number of ways ranging from prefabricated machine- or plasma-cut slots to hacksaw, angle grinder or oxyacetylene torch-cut slots made in the field.

The latter type of slots are seldom satisfactory since it is difficult to produce perforations which are:

(1) of uniform size,
(2) clean, open and free of restrictions and
(3) small enough to control the ingress of finer material into the borehole.

It is therefore preferred that perforated casing used in the construction of community water supply boreholes be of a prefabricated type.

As a general guideline, slots should be:

(1) 300 mm in length,
(2) 3 to 4 mm wide,
(3) positioned in bands around the circumference of the casing,
(4) spaced equally in each band,
(5) each circumferential band of slots separated by 100 mm of plain pipe,
(6) every second band of slots aligned with one another, and
(7) a 300 mm section of plain pipe left at both ends of the casing.

This slot pattern is illustrated in Drawing 4 (Section 6).

Bearing in mind that the number of slots forming each circumferential band depends not only on the casing diameter but also impact on the strength of the casing, it is suggested that the guidelines presented in Table H-1 be adhered to in this regard.

Table H-1 Recommended number of slots per circumferential band for various steel casing diameters and associated percentage open area provided

NORMAL CASING DIAMETER	NUMBER OF SLOTS PER CIRCUMFERENTIAL BAND	PERCENTAGE OPEN AREA
152mm	6	3,0%
165 mm	8	3,7%
203 mm	10	3,7%

Also presented in this table is the approximate open area provided by the above slot pattern applied to each of the given casing diameters. In certain instances, however, it may be required to use more sophisticated and expensive slotted casing. Also known as screens, these include: (1) continuously wound wedge wire screens, (2) louvered screens or bridge-slotted screens and (3) screens pre¬coated with gravel. The decision to use such screens shall again be made by the Hydrogeological Consultant after providing motivation to and gaining acceptance from the Implementing Authority.

The Drilling Contractor will be remunerated for perforated casing per linear metre thereof supplied and installed at the rate bided for each relevant casing diameter as set out in the Schedule of Rates.

(f) Recovery of Steel Casing

The contractor shall make every effort to recover, only on instruction of the Hydrogeological Consultant, steel casing from unsuccessful or abandoned boreholes. This casing can also be refurbished to an acceptable condition for re-use.

The Drilling Contractor will be remunerated for the recovery of steel casing per linear metre thereof salvaged from a borehole as per the rate bided in the Schedule of Rates. The removal of temporary/ starter casing to a depth of 5 m not be a payable item to the contractors.

Payment for the proper refurbishment of such casing shall be made on a time basis against bided standing time rates subject to verification and certification of the amount/duration of this work by the Hydrogeological Consultant.

(g) Borehole Straightness

The straightness (alignment) of a borehole is defined by the degree to which it deviates along its length from an imaginary centre line drawn through the borehole. This is readily determined by passing a “dummy” or “dolly” through the borehole. The equipment comprises a rigid hollow steel pipe having an outside diameter which is smaller by not more than 20 mm than the inside diameter of the final casing. Caution should be exercised when conducting a straightness test in an uncased or partially cased borehole since irregularities in the borehole sidewall may cause the “dummy” to become jammed. Since the casing string is normally constructed from six-metre lengths, it is required that the “dummy” itself have a length of at least six metres in order to adequately “straddle”

casing joints. This equipment must form part of the standard equipment supplied by the Drilling Contractor. It must also be readily available since the Hydrogeological Consultant may request a straightness test at any stage during drilling. The “dummy”, suspended from a flexible steel rope (normally the hoist line with which most drilling rigs are equipped), is slowly lowered down the borehole.

The borehole will be considered straight if the “dummy” passes down the entire length of the borehole and can be withdrawn without it binding or becoming stuck in the borehole. The straightness test must be performed by the Drilling Contractor in the presence of the Hydrogeological Consultant and its success (or failure) recorded by this party.

A borehole which fails a straightness test will be deemed lost (subsection 5-6.1) and it will be required of the Drilling Contractor to drill a replacement borehole at own expense. In the event that a straightness test is made before completion of the borehole, then the contractor will be required to cease operations and facilitate access to the borehole for the duration of such activity. The contractor will recover the cost of production loss (incurred for the duration that drilling activities are interrupted) against the rate bided for standing time in the Schedule of Rates. It will be the responsibility of the Hydrogeological Consultant to verify and certify any claim by the Drilling Contractor in this regard.

(h) Borehole Verticality

This represents the plumb ness of the borehole as measured by the deviation of the centre of the borehole from the vertical at any depth within the bore. The deviation must not exceed two thirds of the borehole diameter (casing inside diameter) per 30 m of depth. Although the SABS 045-1974 standard code of practice for testing water boreholes (including for verticality) has been withdrawn, the nature and form of the apparatus to be used for this purpose remains valid. Drawing 5 in Section 6 of this document illustrates the equipment.

The equipment comprises a tripod (shear legs), a plumb-bob and a flexible wire line. The plumb-bob must be fitted with a centre-mounted spindle at one end and a centralising device on its circumference. The tripod is erected over the borehole such that its apex is above the centre of the borehole. The wire line is passed through a small pulley mounted at the apex.

The plumb-bob, suspended from the wire line, must hang vertically from the pulley such that the wire line passes exactly through the centre of the borehole when the plumb-bob is centrally positioned within the mouth of the casing (tolerance 3 mm).

The vertical distance from the pulley to the top of the casing must be measured accurately (tolerance 0,01 m).

This distance must not be less than 2,4 m.

The plumb-bob is then lowered in equal increments (generally 3 m) down the borehole.

The deviation of the wire line measured in millimetres from the centre of the casing must be determined at each depth increment and the measurements recorded on a data sheet.

This procedure must be continued for the entire length of the borehole.

The measured deviation of the wire line from the centre of the mouth of the casing at each depth increment indicates the drift (Ø) of the plumb-bob.

The measured deviation is used together with a deflection factor (Df) to calculate the actual deflection (Da) of the borehole from the vertical at each depth increment according to the equation:

$Da = Ø\ (d + h)/h$

Where

Ø = the measured drift (in millimetres) of the wire line at a given plumb-bob depth,
d = depth of plumb-bob below casing collar (in metres) for each drift (Ø) measurement,
h = vertical distance between the casing collar and the pulley (at the tripod apex) over which the wire line passes (in metres), and
(d + h)/h represents the deflection factor (Df).

The wire line deviation measurement is most accurately performed if a revolving template with a graduated radial slot is mounted directly over the collar of the casing. The slot is graduated in millimetres outwards from the centre of the template. The template is revolved until the wire line passing through the slot hangs free and straight in the slot and its deviation from the centre read off on the graduated slot.

The verticality test must be performed by the Hydrogeological Consultant in the presence of the Drilling Contractor. The consultant will therefore be required to provide the necessary equipment for conducting a verticality test.

A borehole which fails a verticality test will be deemed lost (subsection 5-6.ℓ) and it will be required of the contractor to drill a replacement borehole at own expense. In the event that a verticality test is made before completion of the borehole, then the Drilling Contractor will be required to cease operations and facilitate access to the borehole for the duration of such activity.

The contractor will recover the cost of production loss (incurred for the duration that drilling activities are interrupted) against the rate bided for standing time in the Schedule of Rates. It will be the responsibility of the Hydrogeological Consultant to verify and certify any claim by the Drilling Contractor in this regard.

(i) Backfilling

This entails filling the annular space between the borehole sidewall and the outside of the casing with suitable material.

The purpose of annular backfilling includes:

(1) the provision of a base on which to found a sanitary seal and
(2) the provision of support for the sidewalls of the borehole and the casing.

In instances where casing has been seated at a comparatively shallow depth in fresh material below a weathered near-surface horizon, all of the drill cuttings removed from the borehole whilst drilling represents suitable material for this purpose. Annular backfilling with this material is not advisable in instances where this is not the case, such as for example where the casing extends to a substantial depth and comprises slotted/perforated sections or where the water-bearing horizon is shallow and open to the borehole via slotted/perforated casing. In these instances, it will be required to insert a formation stabiliser into the annulus. The backfilling must extend to within approximately 5 m of the ground surface.

The Drilling Contractor will be remunerated for backfilling against the standing time rate (which shall include the supply and insertion of material required therefore) bided for in the Schedule of Rates.

(j) Formation Stabiliser

This comprises material which is placed in the annulus between the borehole sidewall and perforated/slotted sections of casing to stabilise the formation against collapse and ingress into the borehole.

The drill cuttings and spoils removed from the borehole is not suitable material for this purpose.
The stabiliser must comprise material which is:

(1) well sorted,
(2) well rounded,
(3) low in calcareous content, and
(4) graded such that the smallest grain size is larger than the casing perforations/slots.

The stabiliser material can either be placed by hand or through a tremie pipe.

Excessive bridging of stabiliser material in the annulus can be prevented:

(1) through the use of centralisers on the casing or
(2) by washing it in with clean water.

The formation stabiliser should extend some 10 m above the top of the uppermost perforated/slotted section of casing before the borehole is developed.

The Drilling Contractor will be remunerated for formation stabiliser per 20 litre container supplied and installed at the rate bided for in the Schedule of Rates.

(k) Concrete Collar

The Drilling Contractor will construct a shallow circular concrete collar around each successfully completed borehole. This collar shall have the dimensions set out in Drawing 6 (Section 6) yielding a volume approaching 0,08 m3. The concrete mixture shall consist of water, Portland cement, stone aggregate (10 mm) and river sand.

Quantities of these materials sufficient to make 0,1 m3 of concrete with the required strength of some 30 MPa after 28 days are:

(1) 20 litre of water,
(2) 42 kg (0,8 bag) of Portland cement,
(3) 0,07 m3 of stone aggregate, and
(4) 0,07 m3 of river sand.

A similar collar may need to be constructed, on request off the Hydrogeological Consultant, over unsuccessful or abandoned boreholes as per Drawing 7, Section 6.

The contractor will be remunerated for a concrete collar per unit constructed at the rate provided in the Schedule of Rates, which rate shall include for the transport, supply, mixing and placement of all the materials required.

(l) Unsuccessful and Abandoned Boreholes

A borehole will be declared unsuccessful at the discretion of the Hydrogeological Consultant. The latter may also, at any time during the course of the work, order the abandonment of a borehole in progress.

In such instances, the Hydrogeological Consultant must instruct the Drilling Contractor on further actions to be taken.

These may include either:

(1) the salvage of any casing from the borehole and
(2) the plugging of the borehole or
(3) the securement of the borehole for long-term monitoring purposes, in which case it will be provided with a sanitary seal (subsection 5-6.n), concrete collar (5-6.k), protection (5-6.q) and marking (5-6.r).

Plugging (or finishing) of an unsuccessful or abandoned borehole is aimed at removing any danger or hazard such boreholes may present to the environment, e.g. as a conduit for the inflow or surface water into the groundwater regime or as a danger to traffic (whether human, stock or vehicular) in the immediate vicinity thereof.

This is achieved by shovelling the drill cuttings and other suitable natural material back into the unsuccessful borehole. In order to prevent this material from “hanging” in the borehole, it might be required to periodically wash it in with clean water during the infilling process.

Once the infill material extends to the ground surface, it must be compacted by tamping it down manually and any subsidence topped up with fresh backfill material. The compacting and topping up activities should be repeated until assurance can be had that all reasonable

precaution has been taken to prevent future subsidence. It will also be required to cast a concrete collar over the infilled borehole (subsection 5-6.m). This process is illustrated in Drawing 7 of Section 6.

The Drilling Contractor will be remunerated for an unsuccessful or abandoned borehole on the basis of bided rates in the Schedule of Rates for such of the following items as are relevant:

(1) drilling per linear metre of depth for each relevant drilling diameter employed,
(2) steel casing per linear metre thereof recovered excluding starter casing to a depth of 5 metres,
(3) backfilling,
(4) a sanitary seal,
(5) borehole protection, and
(6) borehole marking.

Payment for any casing left behind in an unsuccessful or abandoned borehole will only be made, on the same basis as described in (2) above, on written certification by the Hydrogeological Consultant that the contractor has made every reasonable recovery attempt in this regard.

(m) Lost Boreholes

A borehole will be declared lost by the Hydrogeological Consultant in the event that it cannot be completed satisfactorily due to factors such as:

(1) the irrecoverable loss of drilling equipment, materials or tools therein,
(2) accident to plant or heavy machinery,
(3) failure to pass a straightness test, and
(4) failure to pass a verticality test.

A decision in this regard must be made after consultation with the Drilling Contractor, who will have the considered option to either attempt remediation of the situation to the satisfaction of the Hydrogeological Consultant or, alternatively, declare the situation irretrievable. No payment shall be made for any work done, materials used or time spent by the Drilling Contractor on a lost borehole. The cost of any materials recovered in a damaged state from a lost borehole will be borne by the contractor.

A borehole which is declared lost shall be replaced with a new borehole to be constructed by the Drilling Contractor in the vicinity of the lost borehole and at a position indicated by the Hydrogeological Consultant. Payment for a new borehole constructed under these circumstances shall be made on the same basis as for any other successfully completed borehole. Materials recovered in good condition may, however, be re-used by the contractor.

(n) Sanitary Seal

The purpose of a sanitary seal is to prevent the ingress of potentially contaminated surface water into the borehole via the annular space between the borehole sidewall and the outside of the casing. It is required, therefore, that every successful community water supply borehole be provided with a sanitary seal. The seal must consist of Portland cement mixed to slurry with bentonite and water, which is free of oil and other organic matter. The bentonite and water should be thoroughly mixed in the ratio of 2 kg bentonite to 25 litre

water prior to adding and mixing in 50 kg (one bag) cement. The final grout seal must extend to a depth of at least 5 m below ground surface. The seal is preferably placed at the beginning of the drilling process after a 5 m deep 305 mm hole has been drilled and cased with 254 mm ID steel casing (type 1 sanitary seal) or with a 215 mm ID steel casing (type 2 sanitary seal. After placing the casing and centring the hole, an amount of bentonite, cement and water grout, adequate to fill the entire annulus between the casing and the wall of the borehole, is tremied into the casing. The slurry can be gravity-fed into the annulus through a small diameter tube (tremie pipe) extending to the depth of emplacement.

The tremie pipe should be withdrawn slowly as the slurry fills up the annulus.

Care should be taken not to leave voids in the sanitary seal.

These may result from:

(1) channelling caused by casing which is not centred in the borehole,
(2) an improperly mixed slurry which contains lumps and
(3) an annular space which is too small to assure a uniform thickness of seal.

The Drilling Contractor will be remunerated for a sanitary seal per linear metre thereof against the rate bided in the Schedule of Rates. This rate will include for the supply, delivery, mixing and installation of all material for type 1 and type 2 sanitary seals.

(o) Borehole Development

This activity entails flushing all loose material from the borehole upon the completion of drilling.

This material might comprise one or more of:

(1) drill cuttings resting on the bottom,
(2) loose material forming insecure portions of the borehole sidewall,
(3) clayey material “plastered” to the borehole sidewall during the drilling process, and
(4) fine material which has collected behind screened portions of the borehole.

The removal of this potentially “clogging” material often leads to an improvement in the yield of the borehole. The most common borehole development technique used simply entails repeatedly running the drill bit up and down in sequential passes across portions of the borehole with the compressed air turned open. The length of each pass will be dictated by the length of the drill rods used by the contractor. The process is normally performed from the bottom up, one drill rod being removed from the drill string upon development of the preceding (lower) section.

The borehole will be deemed sufficiently developed when very little or no material is brought to the surface in the return flow from the borehole as evidenced by collecting a portion of this flow in a bucket placed at the borehead during development. Other methods, which may be employed, for borehole development include: (1) surge plunging using a surge block and (2) jetting using a purpose-built jetting tool. This activity must be concluded with the collection of a one-litre representative water sample obtained from the return flow during development.

The Drilling Contractor will be remunerated for borehole development on a time basis against the work time rate bided in the Schedule of Rates. It will be the responsibility of the Hydrogeological Consultant to verify and certify any claim by the contractor in this regard.

(p) Borehole Disinfection

Also known as sterilisation, the purpose hereof is to disinfect the borehole and its contents of any bacteria, and particularly coliform bacteria, introduced into the borehole during drilling operations. Sterilisation is most readily accomplished by introducing chlorine (or chlorine-yielding compounds) into the borehole. On completion of development the borehole shall be disinfected with a solution of 0.5 kg of HTH mixed in 250 litres ofwater.

The Drilling Contractor will be remunerated for borehole disinfection per single application at the cost (which shall include for all materials supplied and used and the time spent) bided for one such application as set out in the Schedule of Rates.

(q) Borehole Protection

This entails sealing the borehole from the introduction of foreign material directly through the casing. It is often achieved by means of a lockable cap fitted to the borehole collar. Experience suggests, however, that a 3 to 4 mm thick steel plate (lid) welded onto the borehole collar ensures better security. Of course, it will later be required of the Testing Contractor to remove this plate in order to gain access to the borehole for testing purposes. In order to provide the Hydrogeological Consultant with ready access to the borehole for water level measuring purposes, it is required that a small hole be drilled in the lid. This hole must be furnished with a tamper-proof plug such as a “dead-end” threaded into a water pipe connector welded on the hole. The final diameter of the hole providing access to the borehole must be sufficient to allow a “normal” dipmeter probe to pass through it. It is considered that a diameter of at least 10 mm and not more than 20 mm is suitable for this purpose.

The Drilling Contractor will be remunerated for borehole protection per single installation at the cost (which shall include for all materials supplied and used and the time spent) bided for one such installation as set out in the Schedule of Rates.

(r) Borehole Marking (in the field)

For all Community Water Supply and Sanitation projects, the borehole identifying number will be provided by the Directorate Geohydrology of the DWAF, or else by the Implementing Authority. It is the responsibility of the Hydrogeological Consultant to ensure that the correct number is provided to the contractor for this purpose. The consultant will be responsible for securing a batch of numbers and pass these on to the Contractor as is deemed fit and appropriate.

The activity itself represents marking the borehole by:

(1) script-welding its assigned and unique identifying number onto the lid of the borehole and
(2) planting a concrete block with dimensions of 200 mm x 200 mm x 200 mm - (also bearing the number of the borehole) in the ground at a distance of five metres to the north of the borehole.

The Drilling Contractor will be remunerated for borehole marking per single application at the cost (which shall include for all materials supplied and used and the time spent) bided for one such application as set out in the Schedule of Rates.

(s) Site Finishing

The activities associated with this task must include the repair of construction scars on the work site resulting from drilling activities, as well as the general clean-up of the site of waste materials, debris and oil spills.

The latter must be shovelled over and worked into the ground wherever possible. The Drilling Contractor will be remunerated for site finishing per single application at the cost (which shall include for the time spent) bided for one such application as set out in the Schedule of Rates.

7. Data Recording and Reporting

It is imperative that a detailed and accurate record of all information arising from the borehole drilling activity be recorded with care and diligence. Much of this information can be collected by the Drilling Contractor. It must be recorded on a driller's log such as is provided in Section 6.

This must be kept current and available for inspection at request of the Hydrogeological Consultant. The contractor will include the cost of these activities as a single sum per borehole in the Schedule of Rates. It will be the responsibility of the Hydrogeological Consultant to verify receipt of this information prior to certifying a claim by the Drilling Contractor in this regard.

The following items of information represent the minimum number of parameters, which must be monitored and recorded by the contractor.

(a) Penetration Rate

This represents the time taken, as measured with a stopwatch, to advance the borehole a specific depth (generally one metre). In broad terms, the harder the rock formation the slower the penetration rate and vice versa. Since the hardness (or softness) of a rock formation is a characteristic which can be associated with specific rock types, an accurate record of penetration rates serves as an additional means of identifying changes in rock type with depth. Although a slow penetration rate may be of hydrogeological significance, it can also be caused by worn equipment or difficult drilling conditions such as are presented by loose, unstable material. The measured penetration rate must, therefore, not include time spent overcoming technical problems or remedying mechanical breakdowns encountered during drilling.

(b) Formation Sampling and Description

This entails a brief description of the visual appearance of the rock formation being drilled. It is performed by inspection of the rock chips (also known as drill cuttings) brought to the surface during drilling. A spade full of chips should be collected at the mouth of the borehole for each metre drilled. The "samples" should be placed as sequential piles in ordered rows at a cleared and visible location away from the immediate area of activity and traffic around the borehole being drilled. If instructed by the Hydrogeologist a fist full of each sample should be bagged in individual plastic bags labelled with the borehole number and sample depth. These samples should be kept at a pre-arranged location for description at a later stage. The samples should be described by a suitably qualified

geotechnician/earth scientist according to the guidelines set out by the South African Institute for Engineering Geologists (SAIEG, 1 995). The driller's description must include, as a minimum, a note on the colour of the formation, the relative size of the drill cuttings and, if possible, an identification of the possible rock type.

(c) Water Strike Depth

This information relates to the depth at which any water, including seepage, is encountered in a borehole during drilling. It is possible for water to be encountered at more than one depth as drilling advances. The depth(s) at which water is encountered must be determined to an accuracy of one metre and recorded. It is also necessary to record the nature of the formation associated with the water strike(s). This may, for example, be represented by a single fracture of fissure, a system of such features or a noticeably softer or more weathered horizon.

(d) Blow Yield

Water which is encountered in a borehole being drilled by the rotary air percussion method is blown out of the borehole during drilling. The amount of water being blown from the borehole provides an indication of the possible yield of the borehole. The blow yield must not be estimated, even though a fair visual estimate based on experience can often be provided by the Drilling Contractor. Also, since water may be encountered at more than depth, it is necessary to measure and record the blow yield immediately following each water strike. These measurements should be repeated as drilling continues until constancy is revealed by at least four consecutive measurements each representing a further metre of drilling.

The accurate measurement of the blow yield does not require the use of sophisticated equipment. The most acceptable and preferred means of measurement is provided by the use of a 90° V-notch weir, details of which are provided in Drawing 8, Section 6. The use of a 90° V-notch weir entails channelling all of the water being blown from the borehole through such a weir, which has been placed level in the channel (or ditch) leading the return water flow away from the borehole being drilled. The height of water flowing over the notch is translated into a flow rate or yield as indicated in Table H-2. It is imperative that the height of water flowing over the weir is not measured within the notch itself but at and from a position in the weir upstream and to the side of the notch and which corresponds exactly in height to the inverted apex of the notch.

Table H-2 Tabulation of height vs flow rate data for a 90° V-notch weir

HEIGHT (mm)	FLOW RATE (l/s)	FLOW RATE (l/s) FOR				
		HEIGHT + 2 mm	HEIGHT + 4 mm	HEIGHT + 5 mm	HEIGHT + 6 mm	HEIGHT + 8 mm
10	0,01			0,04		
20	0,08			0,15		
30	0,23			0,04		
40	0,47	0,53	0,60		0,67	0,74
50	0,80	0,88	0,97		1,06	1,16
60	1,26	1,36	1,47		1,59	1,71
70	1,84	1,97	2,11		2,25	2,40
80	2,55	2,71	2,88		3,05	3,23
90	3,41	3,60	3,80		4,00	4,21

100	4,42	4,64	4,87		5,10	5,34
110	5,59	5,85	6,11		6,38	6,65
120	6,94	7,22	7,,52		7,83	8,14
130	8,46	8,79	9,12		9,46	9,81
140	10,17	10,53	10,90		11,28	11,67
150	12,07	12,47	12,88		13,30	13,73
160	14,17	14,61	15,07		15,53	16,00
170	16,48	16,96	17,46		17,96	18,48
180	19,00	19,53	20,07		20,62	21,18
190	21,75	22,32	22,91		23,50	24,11
200	24,72	25,34	25,97		26,61	27,26
210	27,92	28,59	29,26		29,95	30,65
220	31,36	32,08	32,80		33,54	34,28
230	35,04	35,81	36,58		37,37	38,17
240	38,97	39,79	40,62		41,45	42,30

Another common but less preferred method in use is the “drum-and-stopwatch” technique. This requires only that all of the water blown from the borehole be channelled to a point where the concentrated flow can be collected in an open-ended drum of known volume (generally 20 litres) and the time taken to fill the container measured with a stopwatch for accuracy. Dividing the full volume of the drum (in litres) by the time taken (in seconds) to fill the drum gives the blow yield in litres per second (/Is). It is cautioned, however, that this method is only effective and reliable for yields of less than approximately 2 I/s.

(e) Groundwater Rest Level

This parameter represents the depth, as measured from surface, to the level of standing water in the borehole. This measurement can be made with the use of any liquid level indicating device, the most common of which is an electrical contact meter (dip-meter). The groundwater level measurement must be accurate to the nearest 0,01 metre (one centimetre). The measurement reference point, which may either be the ground level or the collar of the borehole, should be identified against the measured depth value. The latter reference point will generally be

represented by the top of the casing with which the borehole has been equipped. In these instances, it will also be necessary to measure the height by which the casing extends above ground level. If the borehole is drilled and completed on the same day, then a groundwater level measurement must be taken immediately before leaving the site.

If drilling and borehole construction extends over two or more days, then such measurements must also be taken before daily drilling activities commence, provided that water, including seepage water, has been encountered in the borehole. A groundwater level measurement must be referenced to the date on which it is made and, if more than one such measurement is made per day, then also the time of each such measurement must be recorded.

8. Down-the-hole Loss of Equipment

Drilling equipment, materials or tools may be lost down a borehole during drilling operations. Since this can often result in the irretrievable loss of a borehole, substantial efforts are generally employed by the Drilling Contractor to recover such material. This activity is also referred to as fishing. The Hydrogeological Consultant will afford the contractor every opportunity and

reasonable time to fish for lost equipment. The Drilling Contractor must, in turn, keep the Hydrogeological Consultant informed of progress and the likelihood of success in this regard. The contractor will have no claim against any other party for any losses incurred in this regard. Further, the fate of a borehole which cannot be continued or completed due to the presence of lost equipment, materials or tools therein will finally be decided by the Hydrogeological Consultant. It may either be declared successful or lost.

(a) Borehole declared Successful

Circumstances under which a borehole may be declared successful include:

(1) the borehole has encountered significant water or is drilled for resource monitoring purposes,
(2) pumping equipment can be installed to an acceptable depth in the borehole and
(3) the lost equipment does not pose a threat to the present and future quality of the groundwater.

In the event that a borehole is declared successful despite the irrecoverable loss of drilling equipment, materials or tools therein, then the exact nature and position of the equipment lost in the borehole must be recorded and appear in relevant project documentation. The Drilling Contractor will be remunerated for a borehole declared successful under these circumstances on the same basis as for any other successfully completed borehole.

(b) Borehole declared Lost

Although the circumstances under which a borehole will be declared lost are varied and diverse, the criteria which should apply include:

(1) the borehole has not yet encountered water irrespective of the depth reached,
(2) the borehole has not yet encountered water even though the geological and hydrogeological indications are positive,
(3) the borehole has encountered water but in too small a quantity to warrant the installation of pumping equipment, yet the geological and hydrogeological indications are positive that more water can be obtained, and
(4) the borehole has encountered a significant quantity of water but the lost equipment prevents the installation of pumping equipment to an acceptable depth. In the event that a borehole is declared lost under these circumstances, then the criteria set out in subsection 5-6.1 for further actions, payment, etc, shall apply.

9. Down-the-hole Borehole Measurements

This activity is more commonly referred to as borehole logging. The measurements are carried out by manually or mechanically lowering tools or instruments of various technical sophistication down a borehole. Borehole logging is useful in instances where:

(1) surface geophysical data need to be calibrated against subsurface information,
(2) geological information for a borehole is absent or suspect,
(3) borehole construction information is absent or suspect, and
(4) information is required for the proper and effective stimulation by various means of borehole yields.

Although down-the-hole borehole measurements may be made at any time during the construction of a borehole, they are generally performed on completion thereof. In the event that

such measurements need to be made before completion of the borehole, then the Drilling Contractor will be required to cease operations and facilitate access to the borehole for the duration of such activity. The contractor will be able to recover the cost of production loss (incurred for the duration that drilling activities are interrupted) against the rate specified for standing time in the Schedule of Rates, any claim in this regard to be verified and certified by the Hydrogeological Consultant.

The nature of the information to be gathered dictates the technique(s) to be used and the time required to complete these measurements. Basic information such as the depth of the borehole and the amount of steel casing installed therein is readily and cheaply determined by means of straightforward and uncomplicated instruments. Geophysical and geological information, on the other hand, requires the more costly application of specialized borehole logging instrumentation including the use of video cameras.

It is required that the more sophisticated of these investigations:

(1) be motivated to and authorised by the Implementing Authority prior to their execution and
(2) be applied judiciously at the discretion of the Hydrogeological Consultant.

(a) Borehole Construction Information

This includes information such as:

(1) the depth and diameter(s) of the borehole,
(2) the depth and diameter(s) of casing installed in the borehole and
(3) the integrity of the casing.

This information can be used to verify/check the documented construction details of a borehole. The depth of a borehole can be determined simply by plumbing with a weighted line. A calliper tool can be used to determine borehole and casing diameters and the length and integrity of the casing string. The length of steel casing can also be determined more simply with a sensor operating on electromagnetic principles.

(b) Geological Information

This covers aspects such as identifying:

(1) the nature of different rock formations occurring at various depths within a borehole on the basis of their geophysical (geo-electrical) properties and
(2) the presence and size of fractures and/or fissures intersected by a borehole.

This information can be used to:

(1) calibrate surface geophysical data obtained from similar geological environments,
(2) determine the optimum depth at which a borehole pump should be installed in a borehole and
(3) direct the application of borehole yield stimulation activities such as hydro fracturing.

(c) Hydrogeological Information

This includes information such as

(1) the porosity of rock formations and
(2) the rate of groundwater movement.

These measurements generally require the use of more sophisticated and costly instrumentation.

(d) Hydro-chemical Information

This covers aspects such as the variation of groundwater quality with depth in a borehole. These measurements again require the use of generally more sophisticated instrumentation. Not quite in the same vein as these measurements, yet of probably greater importance, is the representative water sample obtained from a borehole during its development (subsection 5-6.o).

The water sample must be submitted to a laboratory as soon as is reasonably possible for chemical analysis of:

(1) the electrical conductivity,
(2) the nitrate concentration and
(3) the fluoride concentration.

These results will provide an early indication of whether the groundwater quality is acceptable or not and, if not, whether test pumping is warranted.

10. Rehabilitation of Existing Boreholes

The scope of this work may vary from the basic cleaning out and redevelopment of an existing borehole to the recovery of casing, the reaming and subsequent reinstallation of casing. As far as it is possible, the nature of the rehabilitation required in each individual instance should be identified prior to undertaking this activity since this will indicate which equipment will most suitably complete the task. This is illustrated in the following examples. The straight-forward cleaning out and redevelopment of an existing borehole can readily be accomplished using a rotary air percussion drilling rig. On the other hand, the recovery of casing and the removal of unnatural material from a borehole are more readily accomplished using a cable tool (jumper) drilling rig.

It is particularly helpful to both the Hydrogeological Consultant and the Drilling Contractor undertaking the rehabilitation to know as much about the original construction (e.g. depth, diameter, length and type of casing, geology, etc) of the borehole as possible. This is impossible in instances where original records are lost, deficient, vague or poorly documented/archived. It will be required in such cases to obtain as much information as can reasonably be gleaned from an in-situ inspection of the borehole. This might include such basic measurements as plumbing the current depth of the borehole and establishing, by means of a casing detector, the length of casing (steel) installed, to carrying out various of the more sophisticated down-the-hole borehole measurements and observations (subsection 5-9).

The rehabilitation of an existing borehole should preferably be carried out under the supervision of the Hydrogeological Consultant. In any event, the execution of such work will be subject to the same degree of data collection and record keeping as is required of a new borehole.

The Drilling Contractor will be remunerated for this service on the basis of the rates bided in the Schedule of Rates. It will be expected of the contractor to have assessed the potential technical risks involved with such work and, as a consequence, the contractor shall have no claim against any other party for the loss of equipment, materials or tools incurred in the course of such work.

11. Final Acceptance

The Hydrogeological Consultant shall accept a successfully finished water supply or monitoring borehole by certifying the Drilling Contractor's invoice for such borehole as true and correct for payment by the Implementing Authority. At this stage, the Hydrogeological Consultant will have established that all aspects pertaining to the work and the final product meet, at least, those of the various criteria and requirements set out above which have been imposed.

PART J:TEST PUMPING OF BOREHOLES

PROJECT SPECIFICATIONS

1. Application and Status

These Project Specifications describe the Works to be executed by the Contractor under the Contract and set out the requirements for the Works as well as the minimum standards to be achieved by the Contractor.

These Project Specifications are supplementary to the Standard Specifications for Test Pumping of Boreholes (hereinafter referred to as the "Standard Specifications") and set out variations, additions and omissions to the Standard Specifications and as such, shall be construed and interpreted in conjunction with such Standard Specifications.

These Project Specifications set out the variations, additions and omissions which shall be applicable in the Contract to the Standard Specifications and should there exist any discrepancy, conflict or inconsistency between any part of the Standard Specifications and any part of these Project Specifications, the provisions of these Project Specifications shall take precedence and prevail in the Contract.

2. Interpretation

Wherever reference is made within the Standard Specifications and/or these Project Specifications to the "Geohydrological Consultant" and/or the "geohydrologist" and/or the "Consultant", it shall be deemed to mean the "Engineer" as defined in the Conditions of Contract.

Wherever reference (if any) is made within the Standard Specifications and/or these Project Specifications to the "Implementing Agent", the "Department of Agriculture", "LDA" or any party not being the "Employer", the Contractor, the Engineer, the Geohydrological Consultant o the Consultant, it shall be deemed to mean the Employer.

3. Purpose and Scope

The Contract is for the test pumping of boreholes at agricultural projects and all Works associated therewith in accordance with:

(1) the Information Provided to Tenderer as per Section 1 of this document,
(2) any further detailed instructions as may be ordered by the Employer or the Hydrogeological Consultant.

The borehole test pumping services are required for a period of three years from the date of award and no specific quantity of work has been identified. The Contract is based on a Schedule of Rates with payment to be made on the basis of measured quantities and the tendered rates.

The Scope of Work to be actually executed by the Contractor will be as decided by the Engineer in consultation with the Employer, as provided for in the Conditions of Contract. The work to be carried out during the currency of the contract may be given as separate batches (referred to in the Conditions of Contract as "Works Segments").
Each Works Segment to be executed by the Contractor will, from time to time during the currency of the Contract, be detailed in a written instruction by the Consulting Hydrogeologist as provided for in the Conditions of Contract.

4. Test Pumping Equipment and Materials

The Contractor shall provide all labour, transport, plant, tools, materials and appurtenances, and shall perform all work necessary to satisfactorily complete the Works in accordance with the Standard Specifications.

The Contractor shall furnish all the particulars requested in Section 3-0 (Sub-section 5-0) of this document. The capacity shall be sufficient to cope with the work as specified for the project. It shall be kept at all times in full working order and good repair. The Hydrogeological Consultant and I or the Client will have the right to inspect the equipment to be used prior to the commencement of the Works. If the Hydrogeological Consultant and / or Employer considers that the plant in use on the site of the Works is in any way inefficient or inadequate in capacity, he shall have the right to instruct the Contractor to put such equipment in order within seven days or, alternatively, to remove such plant and replace it with other plant or equipment which he considers necessary to meet the requirements of the Contract.

In the event of breach by the Contractor of this requirement, the Hydrogeological Consultant reserves the right to recommend to the Client to terminate the Contract in accordance with the provisions of Sub-Clause 58.(1)(b)(vi) of the Conditions of Contract. Equipment brought onto the site may not be removed there from without the written permission of the Hydrogeological Consultant. It will be the responsibility of the Contractor to arrive on site with all staff, equipment, materials and chemicals required to complete the work without interruption.

Where existing equipped boreholes are to be tested, the Contractor must provide suitable plant to enable the installed pumping equipment to be removed and reinstalled. This includes the removal and reinstallation of hand pumps, wind pumps and motorised pumps and may also include the recovery of existing pumping equipment that was previously dropped into a borehole.

5. Data Recording and Reporting

In addition to a site diary stating daily activities, borehole and pump test data as well as installed borehole equipment is to be recorded on forms 1, 5a to 5f and 6 and 6a which are included in Section 6 of the Contract Documents.

6. Measurement and Payment

The Contractor appointed under this contract is considered to be an expert in his field and is expected to organise and carry out the required duties in an expert manner. Problems encountered during testing will be overcome entirely within the framework of these Specifications and the Schedule of Rates, and no claims for extra payments will be entertained for problems foreshadowed in the Specification or due to limitations imposed by this Specification.

The measurement of and payment for all materials and work provided by the Contractor in the course of the project will be according to the criteria as set out and are applicable in respect of such as are variously specified in the Standard Specifications and hereunder:

6.1. Standing Time

This will cover periods when the test pumping rig and crew or, if more than one rig and crew are fielded, when all rigs and crews are idle waiting for decisions by the Consultant where those decisions or whose presence is required before the commencement or continuation of the work.

Under no circumstances will standing time be payable for any delays other than those incurred by the Hydrogeological Consultant's decisions.

Except only for abnormal weather conditions as provided for in Sub-Clause 47.(2) of the Conditions of Contract, no standing time will be payable due to inclement weather or prevention of access to a site by the Contractor or Hydrogeological Consultant due to inclement weather. Further, no standing time will be payable to the Contractor in respect of any periods where the Contractor is not engaged in the execution of the Works as a result of the Consultant having failed to issue an instruction to commence with the works of any Works Segment and there being no other Contract Works on which the Contractor is required to carry out work.

6.2. Inter-hole Moves

Payment for inter-hole moves up to a distance of ten kilometres shall be made at the unit rate tendered for in the Schedule of Rates. Inter-hole moves in excess of ten kilometres shall be remunerated for the first ten kilometres at the tendered unit rate and, for each full kilometre thereafter, at the rate per kilometre tendered in the Schedule of Rates.

6.3. Removal of Existing Pumping Equipment

This rate shall cover the removal of existing pumping equipment in a borehole to be tested. Payment for removal up to an installed depth of 50 m shall be made at the unit rate tendered for in the Schedule of Rates. Installed depths in excess of 50 m shall be remunerated for the first 50 m at the tendered unit rate and, for each full metre thereafter, at the rate per metre tendered in the Schedule of Rates.

6.4. Re-installation of Existing Pumping Equipment

This rate shall cover the re-installation of existing pumping equipment in a borehole following test pumping of the borehole. Payment for installation up to a depth of 50 m shall be made at the unit rate tendered for in the Schedule of Rates. Re-installation depths in excess of 50 m shall be remunerated for the first 50 m at the tendered unit rate and, for each full metre thereafter, at the rate per metre tendered in the Schedule of Rates. The existing pumping equipment shall be reinstalled and left in working condition as it was found before removal unless the Contractor is instructed otherwise by the Hydrogeological Consultant.

STANDARD SPECIFICATIONS FOR THE TEST PUMPING OF BOREHOLES

1. Purpose and Scope

The efficient operation and utilisation of a borehole requires insight into and an awareness of its productivity and that of the groundwater resource from which it draws water. Such insight and awareness is provided by borehole testing. This activity, which is also known as test pumping, provides a means of identifying potential constraints on the performance of a borehole and on the exploitation of the groundwater resource. The recognition and understanding of these constraints promotes the proper, judicious and optimum exploitation of the groundwater resource. Ignorance and disregard of these constraints can lead, at best, to the uneconomical operation of the borehole and, at worst, to over-exploitation of the resource.

The Test Pumping Contractor (Testing Contractor) may be required to test either:

(1) newly drilled boreholes which have not yet been equipped,
(2) existing “older” boreholes which may or may not already be equipped with pumping installations, or
(3) a mixture of the aforementioned.

Test pumping serves two primary objectives. The first of these is an assessment of the productive capacity (yield potential) of the borehole. The second objective addresses the productivity of the groundwater resource. These objectives are met by various types of borehole tests performed separately and often sequentially.

These are identified as:

(1) the slug test,
(2) the calibration test,
(3) the stepped discharge test,
(4) the constant discharge test and
(5) the recovery test.

Factors determining which of these tests must be performed include:

(1) the potential yield of the borehole and
(2) the amount of water which it will be required to supply.

(a) The Slug Test

The slug test provides a rapid means of assessing the potential yield of especially low yielding (less than 0.5 ℓ/s) boreholes (Vivier et. al, 1995). The results may indicate whether it is feasible and warranted to perform other tests on the borehole. As with any of the other tests, a slug test can be executed in any borehole and not necessarily only newly drilled boreholes.

The test involves measuring the water level response in a borehole to the rapid displacement of water therein.

This displacement might cause either:

(1) a rise in water level as would result from the introduction of a slug below the rest water level or
(2) a drop in water level, as would be caused by the removal of a quantity of water from the borehole.

In instances where a slug is introduced, the water level will recede to its original level. The sudden removal of a quantity of water from the borehole will cause the water level to rise to its original level. The rate of recession or rise provides an indication of the yield of the borehole. In qualitative terms the more rapid this is, the higher the potential yield of the borehole.

(b) The Calibration Test

A calibration test requires that water be pumped from the borehole at three or more different rates over short (15 minutes), sequential periods of time. The response of the water level to each known pumping rate is measured and recorded. The calibration test provides a means of assessing the yield potential of borehole according to the magnitude of the water level decline associated with each pumping rate. This information is used to select appropriate pumping rates at which to perform a stepped discharge test or a pumping rate at which to perform a constant discharge test.

(c) The Stepped Discharge Test

Also known as a step drawdown test, it is performed to assess the productivity of a borehole. It also serves to more clearly define the optimum yield at which the borehole can be subjected to constant discharge testing if required.

The test involves pumping the borehole at three or more sequentially higher pumping rates each maintained for an equal length of time, generally not less than 60 minutes and seldom longer than 120 minutes. The magnitude of the water level drawdown in the borehole in response to each of these pumping rates must be measured and recorded in accordance with a prescribed time schedule.

The actual pumping rate maintained during each “step” must also be measured and recorded. As a rule, the rate of water level recovery for a period of time immediately following the period of pumping should also be monitored according to the same time schedule as during pumping.

(d) The Constant Discharge Test

A constant discharge test is performed to assess the productivity of the aquifer according to its response to the abstraction of water. This response can be analysed to provide information in regard to the hydraulic properties of the groundwater system and arrive at an optimum yield for the medium to long-term utilisation of the borehole.

This test entails pumping the borehole at a single pumping rate, which is kept constant for an extended period of time. The test duration shall not be less than 12 hours and, in some instances, might last up to 72 hours or more. The duration is generally determined by the importance, which is attached to the borehole and groundwater resource not only in terms of its yield potential but also in terms of its intended application.

The pumping rate is set at a yield, which it is considered the borehole and groundwater system will be able to maintain for the entire planned duration of the test and, in the process, utilising better than 70 per cent but not exhausting the available drawdown. It is critical that the pumping rate during the entire duration of the test be kept as constant as possible. The drawdown in water level in the borehole during the course of the test is again measured and recorded according to a prescribed time schedule. In the case of this type of test, it is imperative that water level measurements be made during the recovery period following the end of pumping.

(e) The Recovery Test

This test provides an indication of the ability of a borehole and groundwater system to recover from the stress of abstraction. This ability can again be analysed to provide information with regard to the hydraulic properties of the groundwater system and arrive at an optimum yield for the medium to long-term utilisation of the borehole.

Although referred to as a test, it rather represents a period of monitoring activity following a period of pumping. The rate at which the water level in the tested borehole (or any other borehole affected by the abstraction) recovers towards its starting level (the groundwater rest level before pumping started) is monitored in this period. The duration of this monitoring is generally equal to that of the preceding period of pumping unless the rate of recovery is sufficiently rapid so that the starting water level is reached in a shorter period of time.

2. General Approach and Methodology

As mentioned in subsection 4-I, various factors determine which type of pumping test (or tests) might need to be performed. It is the responsibility of the Hydrogeological Consultant to formulate a test pumping schedule for each successful borehole.

All project-related test pumping activities will also be carried out under the direct supervision of the Hydrogeological Consultant. The execution of a pumping test in accordance with established scientific protocols must be undertaken by a suitably experienced and equipped Testing Contractor.

It will be the task of the Hydrogeological Consultant to evaluate and analyse the data, draw conclusions with regard to the productivity of the borehole and the aquifer, and make recommendations with regard to a suitable operating schedule for the borehole and the optimum exploitation of the groundwater resource.

Both the practical and analytical aspects of test pumping benefit greatly from prior information regarding the borehole and the aquifer which it taps into.

This information is gleaned during the drilling and the construction of the borehole.

It includes knowledge of:

(1) the amount of water blown out of the borehole during drilling operations,
(2) the depth(s) at which water was struck in the borehole,

(3) the construction of the borehole in terms of the setting of especially perforated (slotted) casing and
(4) the nature of the rock formation at the depth(s) where water was struck.

This information should be communicated to the Testing Contractor by the Hydrogeological Consultant. If not, the contractor has the right to request and expect to receive this information from the Hydrogeological Consultant prior to the testing of any borehole.

The Testing Contractor must keep a full record of the test pumping which was undertaken and provide this on completion of the test.

This record must include the following basic information:

(1) the depth to water level before the start of testing,
(2) the depth at which the test pump was installed,
(3) the type, make and model of the test pump used,
(4) the pumping rate as measured at regular intervals during the test and
(5) the water level in the borehole as measured according to a prescribed time schedule both during and after pumping,
(6) the depth to which steel casing was installed in the borehole.

The contractor must be sufficiently well equipped to gather this information with acceptable accuracy.

3. Equipment and Materials

These represent the test unit and all ancillary equipment and materials needed to accurately and efficiently perform borehole testing. Details are provided as follows.

(a) Test Unit

The test unit must comprise a positive displacement (PD) type pump element and a pump head driven by a motor fitted with an accelerator, gearbox and clutch. The unit must be in good working order and capable of maintaining a minimum of 72 hours of continuous operation.

The unit must be capable of delivering water at a rate in excess of the expected maximum yield of the borehole to be tested.

(b) Discharge Piping

This comprises both the pipe (rising main or pump column) which brings the water to surface and the pipe (discharge hose) used to lead the pumped water away from the borehole being tested. The Testing Contractor must supply sufficient rising main to set the test pump at a depth of at least 100 m below the surface. It may, however, be required under certain circumstances to set the test pump at a greater depth in the borehole. The pump column must be of uniform diameter throughout. The contractor must also provide discharge piping in the amount of at least 50 m. This must be free of leaks for its entire length. It may again, under certain circumstances, be required to discharge the pumped water at a point further away than 50 m (possibly in excess of 300 m) from the borehole being tested. In such instances, a similar procedure to that discussed above in regard to the rising main must be followed.

(c) Discharge Measuring Equipment/Instrumentation

This must be adequate to accurately measure the pumping rate within the range of yields expected from successful project boreholes. If volumetric methods are used, a stopwatch for measuring time to an accuracy of at least one- tenth of a second is required. The full capacity of each container must be determined accurately. The contractor must also ensure that a container stands level when it is being used for discharge measurements. Guidelines regarding the use of different size containers for volumetric discharge rate measurements in specific yield ranges are given below:

YIELD RANGE	CONTAINER SIZE
Less than 2 ℓ/s	20 ℓ
2 ℓ/s to 5 ℓ/s	50 ℓ
5 ℓ/s to 20 ℓ/s	210 ℓ
20 ℓ/s 30 ℓ/s	500 ℓ

It is recognized that some water leakage will generally occur especially at the borehead during pumping.

This is acceptable provided that:

(1) such leakage does not interfere with any water level monitoring and
(2) the total amount of leakage to the end of the discharge pipeline does not exceed one per cent of the pumping rate as measured at the end of this pipeline.

(d) Water Level Measuring Equipment/Instrumentation

The contractor must provide at least three water level measuring devices which are each capable of providing an accuracy of at least 0,01 m (10 mm) and are of sufficient length to match the pump installation depth. If ungraduated electrical contact meters (dip-meters) are used for this purpose, each such instrument must be equipped with a measuring tape of an acceptable length and approved standard and which is graduated to an accuracy of at least 0,01 m (10 mm). These instruments must be in good working order and number at least one spare for each two on site

The contractor must further provide conduit tubing of sufficient length to match the pump installation depth. The diameter of this tube must be large enough (minimum 15 mm) to allow free movement of the dip-meter probe and cable therein. The tubing must be made of material strong enough to withstand reasonable pressure on its sidewall which might cause a constriction. The tube must be open at its lower end to allow the free entrance of water into the tube. This is facilitated by perforating the bottom section of the conduit tube sidewall. Precautions should also be taken to prevent the dip-meter probe from passing beyond the bottom end of the conduit tube and, as a result of entanglement, not able to be withdrawn.

(e) Other Materials

No pumping test should commence without field data sheets on which to record all data and information relevant to the test pumping activities in an acceptable format. The examples provided in Section 6 of the Contract Documents indicate the format and level of detail which is required of these data sheets. The contractor must also provide backup measuring equipment and instrumentation which is immediately available to replace any similar item which may become damaged or broken during the course of the test such that measurements are no longer accurate or reliable.

4. Arrival-on-site Actions

The contractor must firstly establish whether the borehole is equipped or not. If so, the contractor will be required to:

(1) remove the equipment taking care not to damage either it or the installation,
(2) inspect the equipment for defects and
(3) note down all particulars regarding the equipment and the installation.

The latter includes but should not be limited to the manufacture and type of pump (and motor if motorised), the depth to which the pump was installed, the power rating of the motor and the diameter, length and quantity of pump column sections.

The contractor must next establish whether there are any other boreholes in the vicinity of that to be tested. If so, then the following information must be gathered and recorded for each:

(1) the straight-line distance (in metres) between each such borehole and that to be tested,
(2) whether the borehole is equipped, open or sealed and, if equipped
(3) whether the installation is operational or not.

Depending on the degree of access allowed by such a borehole, the contractor must establish whether there is water in the borehole and if so, measure and record:

(1) the depth to the groundwater rest level,
(2) the height of the borehole collar above ground level and where possible also
(3) the depth of the borehole.

The final activities to be carried out prior to the actual installation of the test pump into the borehole to be tested must involve measuring and recording:

(1) the diameter of the borehole,
(2) the depth of the borehole as determined by means of a weighted line or plumb bob and
(3) the depth to the groundwater rest level in the borehole, again referenced to a date.

An example of a field data sheet for recording the above information is presented in Section 6 of the Contract Documents. Payment for this work shall be incorporated into that for data recording.

5. Test Pump Installation

The conduit tube should be attached and secured to the first section of pump column behind the pump element and the test pump installed to the required depth, attaching and securing the conduit tube to the riser main every 2 to 3 m.

The Testing Contractor will be remunerated for the installation of a test pump per linear metre of depth installed at the rate tendered as set out in the Schedule of Rates. The rate tendered for this activity shall also apply to the withdrawal of the test pump from the borehole on completion of all testing activities.

6. Equipment Set-up and pre-test Actions

Where possible, the discharge pipe must be laid out in a downhill direction from the borehole to be tested unless this will take it in the direction of or past another borehole located in the vicinity of that to be tested. In such instances, lay the discharge pipe out in a downhill direction which will take its furthest end as far as possible away from any other borehole in the vicinity.

In field situations where the terrain is extremely flat, the length of the discharge pipe must be extended from 50 m to at least 300 m if any possibility exists that the discharged water may infiltrate to the groundwater resource within the radius of influence of the test.

A final decision in this regard must be made by the Hydrogeological Consultant and communicated to the contractor. The dip-meter should be inserted into the installed conduit tube and run down this tube to the bottom to make sure that it passes freely along the full length of the tube. If the dip-meter used is not graduated to an accuracy of 0,01 m, mark the position on the dip-meter cable where it indicates the depth to the groundwater rest level and attach the end of the graduated tape at this position on the cable ensuring that the zero mark of the graduated tape corresponds exactly to this mark.

Slowly lower the dip-meter and graduated tape down the conduit tube, in the process securing the tape to the dip-meter cable every 2 to 3 m. Ensure that there is no slack between each point where the tape is secured to the dip-meter cable. Also make sure that the dip-meter cable and graduated tape combination passes freely along the full length of the conduit tube.

The Testing Contractor shall be remunerated for this work per set-up at the rate tendered for one such activity as set out in the Schedule of Rates.

7. Final pre-test Measurements

The Contractor shall ensure that all the basic information required on the field data sheet has been collected and recorded as completely as possible. The basic information data entry fields can be used as a checklist for information to be measured/collected and recorded. The Contractor shall not guess at any information which has not been measured.

Payment for this work shall be incorporated into that for data recording and reporting.

8. Data Recording

(a) Discharge Measurements

The measurement of discharge (yield or pumping rate) must be consistently accurate and reliable. The method of measurement must be appropriate to meet this requirement. Where volumetric calculation methods are applied, time will be measured using a stopwatch and the container volume must be accurately known. The volumetrically measured yields recorded on the field data sheets must be based on the average obtained from a set of three sequential measurements.

(b) Water Level Measurements

The periodicity of water level measurements for each type of test are given in the data recording forms in Section 6 of this document.

This information must be filled in as a record of all data collection activities carried out for a pumping test. The type of water level measurement values required to be recorded on the field data sheet are the actual (or true) drawdown values.

These represent measurements which reflect the depth of the water level below the groundwater rest level depth, i.e. which already take into account the groundwater rest level depth below the reference measuring point. It should be noted that the more basic type of measurement which reports the depth of the dynamic water level as a distance below the reference measuring point, ie which combines the depth of the water level below the groundwater rest level depth and the depth of the groundwater rest level below the reference measuring point, gives only an apparent (or false) drawdown value.

All water level measurements must be measured to an accuracy of at least 0,01 m (10 mm). The water level data must be plotted on the semi-logarithmic graph paper provided with each set of field data sheets. The plotting of these data must take place as the test proceeds, i.e. each water level measurement must be plotted on the graph as soon as possible after it was measured. The field data sheets and accompanying water level graphs must be shown to any authorised supervisory personnel at request and will be up-to-date at the time of such request.

(c) Other Information

The Testing Contractor must also record any extraordinary observations made during the test. These may include:

(1) changes in the colour of the discharged water,
(2) changes in the turbidity of the discharged water,
(3) the presence of air in the discharged water, and
(4) rainfall events which occur during a test.

Remuneration for all data collection and recording activities by the Contractor in the course of a pumping test shall be incorporated into an hourly rate as set out in the Schedule of Rates.

9. Groundwater Sampling

9.1. Sampling for Macro-Element Analysis

A water sample should be collected from the end of the discharge pipeline no sooner than 15 minutes before the scheduled end of a pumping test whether this be of a calibration, stepped discharge or constant discharge nature. This will ensure that a water sample is collected in case testing does not proceed to include either one or both of the latter two types of test.

The standard amount of sample normally collected is in a clean, sterilised plastic bottle of capacity 240 millilitre or greater and equipped with a watertight screw-on cap. This is the standard issue sample bottle provided by the DWAF. Depending on the analysing laboratory's requirements, however, a sample of up to two litres in volume may have to be collected.

The Hydrogeological Consultant will advise on this matter in instances where the contractor is required to collect samples, in which case the consultant will provide ampoules containing

preservative chemicals if required. All other materials such as sample bottles, tie-on labels and sample custody are to be provided by the contractor.

(a) Sampling Procedure

Wash hands thoroughly and rinse the sample bottle three times with the water to be sampled, i.e. that being pumped from the borehole. Fill the bottle so that a space of five to ten millimetres is left at the top. Add the preservative as instructed in (b).

(b) Sample Preservation

Gently tap the bottom of an ampoule of preservative on a firm surface so that all the chemical flows to below the constriction. Hold the ampoule firmly upright with thumbs placed either side of the constriction, flex off the neck, turn the ampoule upside down and place it in the bottle together with the broken-off neckpiece. Firmly screw on the cap of the sample bottle after rinsing it well with water from the borehole. Shake the capped sampled bottle well.

Caution should be exercised when handling the preservative since this chemical is poisonous.

(c) Sample Custody

Place the sample bottle in a cooler or icebox and keep it stored under chilled conditions. The water sample will be collected by the Hydrogeological Consultant.

10. Aborted Tests and Breakdowns

The Hydrogeological Consultant may at any stage during the execution of a pumping test request the Testing Contractor to abort a test if, in the opinion of the consultant, continuation of the test is not in the interests of the project.

Factors which might contribute to such a decision by the Hydrogeological Consultant are:

(1) sufficient data having been collected for an adequate scientific evaluation thereof,
(2) the execution of the test not meeting project criteria and requirements (such as for constancy of yield, accuracy of yield measurements or accuracy of water level measurements, sufficiency of discharge line length, etc) or
(3) a mechanical breakdown occurring during pumping which causes a test to be interrupted or aborted.

(a) Tests aborted due to sufficiency off data

In such instances, the Testing Contractor will be remunerated for the actual duration of testing (including recovery testing) at the hourly rates set out in the Schedule of Rates.

(b) Tests aborted due to incorrect execution

The Testing Contractor will be required to remedy the cause(s) for an abort decision by the Hydrogeological Consultant.

The test shall be restarted, as if it were the first attempt, after the water level has recovered to within five per cent of the pre-test rest water level or the contractor is instructed thereto by the Hydrogeological Consultant.

The Testing Contractor shall not be entitled to remuneration for any test which is aborted under these circumstances irrespective of the time elapsed up to receipt of the instruction to abort.

(c) Tests aborted due to breakdowns

The following procedures are recommended when a mechanical breakdown occurs during pumping which causes a test to be interrupted or aborted.

Calibration Test:

Start immediately with the measurement and recording of the water level recovery rate according to the periodicity given in reporting forms. Irrespective of how long after the start of pumping the breakdown occurs or how rapidly the breakdown can be fixed, continue with water level recovery measurements until the water level is within five per cent of the pre-test rest water level or, at the discretion of the Hydrogeological Consultant, may be discontinued.

Restart the calibration test as if it is the first attempt. The Testing Contractor shall not be entitled to remuneration for a calibration test which is aborted under such circumstances.

Stepped discharge test:

Record the time of the breakdown and start immediately with the measurement and recording of the water level recovery according to the periodicity given in reporting forms. If the breakdown occurs during the first or second steps of the test, continue with water level recovery measurements until the water level is within five per cent of the start rest water level and then restart the stepped discharge test as if it is the first attempt. If the breakdown occurs during the third step of the test, can be fixed and the pump restarted to produce the same yield (as before the breakdown) within five minutes of the breakdown occurring, continue with the test at this yield after measuring and recording the water level immediately before restarting the pump. Only one such breakdown event is allowed.

If a second breakdown occurs, proceed as described for a first step breakdown. If the breakdown occurs during the fourth or later step of the test, can be fixed and the pump restarted to produce the same yield (as before the breakdown) within five minutes of the breakdown occurring, continue with the test and complete it at this yield after measuring and recording the water level immediately before restarting the pump. If a breakdown at this stage cannot be fixed within five minutes, continue with water level recovery measurements as if the test has been fully completed.

The Contractor shall not be entitled to remuneration for a stepped discharge test, which is aborted:

(1) within the first or second step, or
(2) within the third step and cannot be restarted within the time allowed for repair.

Constant discharge test:

Note the time of the breakdown and start immediately with the measurement and recording of the water level recovery according to the periodicity given in reporting forms. If the breakdown occurs within the first two hours after the start of pumping, continue with water level recovery measurements until the water level is within five per cent of the pre-test (start) rest water level and then restart the test. If the breakdown occurs later than two hours into the test, can be fixed and the pump restarted to produce the same yield as before the breakdown within the time periods (after the breakdown occurring) given in Table 5-10-1, continue with the test at this yield after measuring and recording the water level immediately before restarting the pump.

If the breakdown cannot be fixed and the pump started within one hour of the breakdown occurring, continue with water level recovery measurements until the water level is within five per cent of the pre-test rest water level and then restart the constant discharge test as if it is the first attempt unless the following condition has been met. If the breakdown occurs after approximately 80 per cent of the planned duration of the constant discharge test has been successfully completed, continue with water level recovery measurements as if the test has been fully completed. The allowable elapsed time (in hours) in regard to selected constant discharge test total durations in order for this specification to be acceptable is given in Table 5-10-2.

Table 1 Period allowed for breakdown repair and continuation of testing

TIME BREAKDOWN AFTER START PERIOD ALLOWED FOR REPAIR OF TEST	
2 hours to 4 hours	6 minutes
4 hours to 6 hours	12 minutes
6 hours to 8 hrs hours	18 minutes
8 hours to 10 hours	24 minutes
10 hours to 12 hours	30 minutes
12 hours to 14 hours	36 minutes
14 hours to 16 hours	42 minutes
16 hours to 18 hours	48 minutes
18 hours to 20 hours	54 minutes
Longer than 20hrs	60 minutes

Table 2 Period after which a constant discharge test may be considered completed in the event of a breakdown

CONSTANT DISCHARGE TEST DURATION	ALLOWABLE TIME ELAPSED TO BREAKDOWN
24 hours	20 hours (equivalent to 80% of total time)
36 hours	30 hours (equivalent to 83% of total time)
48 hours	38 hours (equivalent to 79% of total time)
72 hours	60 hours (equivalent to 77% of total time)

The Testing Contractor shall not be entitled to remuneration for a constant discharge test, which is aborted under circumstances, which preclude its restart within the time allowable for repair and continuation.

The contractor will, however, be entitled to remuneration for a constant discharge test which is aborted after approximately 80 per cent of the planned duration of the

constant discharge test (refer to Table 5-10-1) has been successfully completed, payment being made for the actual duration of the test (including the recovery test) at the hourly rates set out in the Schedule of Rates.

C3.4 Health and Safety Specification

Project title:	**EXPLORATION AND INSTALLATION OF BOREHOLE AND BACKUP TANK FOR WHITTLESEA DEPOT**
Project Number:	**CHR5-22/23-0015.**

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1. INTRODUCTION

1.1. In terms of Construction Regulation 5(1) (*b*) of the Occupational Health and Safety Act, 1993 (Act 85 of 1993), DPW&I – Development of Public Works, as the Client and/or its Agent on its behalf, shall be responsible to prepare Health & Safety Specifications for any intended construction project and provide any Principal Contractor who is making a bid or appointed to perform construction work for the Client and/or its Agent on its behalf with the same.

1.2. The Principal Contractor and contractors shall be responsible for the Health & Safety Policy for the site in terms of Section 7 of the Act and in line with Construction Regulation 7 as well as the Health and Safety Plan for the project.

1.3. This 'Health and Safety Specifications' document is governed by the "Occupational Health and Safety Act, 1993 (Act No. 85 of 1993), hereinafter referred to as 'The Act'. It should be noted that no single Act or its set of Regulations be read in isolation. Furthermore, although the definition of Health and Safety Specifications stipulates 'a documented specification of all health and safety requirements pertaining to associated works on a construction site, so as to ensure the health and safety of persons', it is required that the entire scope of the Labour Legislation, including the Basic Conditions of Employment Act be considered as part of the legal compliance system. With reference to this specification document this requirement is limited to all health, safety and environmental issues pertaining to the site of the project as referred to here-in. Despite the foregoing it is reiterated that environmental management shall receive due attention.

1.4. Prior to drafting the Health and Safety Plan, and in consideration of the information contained here-in, the contractor shall set up a Risk Assessment Program to identify and determine the scope and details of any risk associated with any hazard at the construction site, in order to identify the steps needed to be taken to remove, reduce or control such hazard. *This Risk Assessment and the steps identified will be the basis or point of departure for the Health and Safety Plan.* The Health and Safety Plan shall include documented 'Methods of Statement' (see definitions under Regulation 1 of Construction Regulations) detailing the key activities to be performed in order to reduce as far as reasonably practicable, the hazards identified in the Risk Assessment.

1.5. Every effort has been made to ensure that this specification document is accurate and adequate in all respects. Should it however, contain any errors or omissions they may not be considered as grounds for claims under the contract for additional reimbursement or extension of time, or relieve the Principal Contractor and contractors from his responsibilities and accountability in respect of the project to which this specification document pertains. Any such inaccuracies, inconsistencies and/or inadequacies must immediately be brought to the attention of the Agent and/or Client.

2. SCOPE OF HEALTH AND SAFETY SPECIFICATION DOCUMENT

The Health and Safety Specifications pertaining to the **MAINTENANCE / REPAIRS OF ELECTRICAL AND MECHANICAL INSTALLATIONS AND ACCESS CONTROL TO STATE OWNED BUILDINGS IN CHRIS HANI REGION FOR A PERIOD OF TWO (2) YEARS.**

These specifications are contained in the index and intend to specify the normal and specific requirements of **DPW&I - The Department of Public Works & Infrastructure** pertaining to the health and safety matters (including the environment) applicable to the project in question. These Specifications should be read in conjunction with the OHS Act 85, 1993 and its Regulations with specific reference to the Construction Regulations. This will also include any Safety Standards which were or will be promulgated under the Act or incorporated into the Act and be in force or come into force during the effective duration of the project. The stipulations in this specification, as well as those contained in all other documentation pertaining to the project, including contract documentation and technical specifications shall not be interpreted, in any way whatsoever, to cancel or nullify any stipulation of the Act, Regulations and Safety Standards which are promulgated under, or incorporated into the Act.

3. PURPOSE

3.1. The purpose of this specification document is to provide the service provider with any information other than the standard conditions pertaining to construction sites which might affect the health and safety of persons at work and of persons in connection with the use of plant and machinery. It further aims to protect persons other than its employees against any potential hazards to their health and safety arising out of or in connection with the activities of persons at work during the construction work for DPW&I - The Department of Public Works & Infrastructure.

3.2. To brief the Principal Contractor/Contractor on the significant health and safety requirements and aspects of the project. This shall include the provision of the following information and requirements namely:

a) safety considerations affecting the site of the project and its environment;
b) health and safety aspects of the associated structures and equipment;
c) required submissions on health and safety matters required from the Principal Contractor (and Contractors);
d) and the Principal Contractor's (and Sub - Contractors) health and safety plans.

3.3. To serve to ensure that the Principal Contractor (and Contractors) is fully aware of what is expected from them with regards to the Occupational Health and Safety Act, 85 of 1993 and the Regulations made there-under including the applicable safety standards, and in particular in terms of Section 8 of the Act.

3.4. To inform the Principal Contractor that the Occupational Health and Safety Act, 85 of 1993 in its entirety shall apply to the contract to which this specification document applies. The Construction Regulations promulgated on 7 February 2014 and incorporated into the above Act by Government Notice R 84, published in Government Gazette 37305 shall specifically apply to all persons involved in the construction work pertaining to this project.

4. DEFINITIONS

"Purpose of the Act" –To provide for the health and safety of persons at work and the health and safety of persons in connection with the use of plant and machinery; the protection of persons other than persons at work against hazards to health and safety arising out of or in connection with the activities of persons at work; to establish an advisory council for occupational health and safety; and to provide for matters connected therewith.

"the Act" means the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993);

"Agent" –means a competent person who acts as a representative for a client;

"Client" –means any person for whom construction work is performed;

"Construction manager" means a competent person responsible for the management of the physical construction processes and the coordination, administration and management of resources on a construction site;

"Construction site" means a work place where construction work is being performed;

"Construction supervisor" means a competent person responsible for supervising construction activities on a construction site;

"Construction work" means any work in connection with -

(a) the construction, erection, alteration, renovation, repair, demolition or dismantling of or addition to a building or any similar structure; or

(b) the construction, erection, maintenance, demolition or dismantling of any bridge, dam, canal, road, railway, runway, sewer or water reticulation system; or the moving of earth, clearing of land, the making of excavation, piling, or any similar civil engineering structure or type of work;

"Contractor" –means an employer who performs construction work;

"Designer" means-

(a) a competent person who-

(i) prepares a design;

(ii) checks and approves a design;

(iii) arranges for a person at work under his or her control to prepare a design, including an employee of that person where he or she is the employer; or

(iv) designs temporary work, including its components;

(b) an architect or engineer contributing to, or having overall responsibility for a design;

(c) a building services engineer designing details for fixed plant;

(d) a surveyor specifying articles or drawing up specifications;

(e) a contractor carrying out design work as part of a design and building project; or an interior designer, shop-fitter or landscape architect;

"Excavation work" means the making of any man-made cavity, trench, pit or depression formed by cutting, digging or scooping;

"Fall protection plan" means a documented plan, which includes and provides for—

(a) all risks relating to working from a fall risk position, considering the nature of work undertaken;

(b) the procedures and methods to be applied in order to eliminate the risk of falling; and

(c) a rescue plan and procedures;

"Health and Safety File" –means a file, or other record containing the information in writing required by the Construction Regulations;

"Health and Safety Plan" –means a site, activity or project specific documented plan in accordance with the client's health and safety specification;

"Health and Safety Specification" –means a site, activity or project specific document prepared by the client pertaining to all health and safety requirements related to construction work;

"Method Statement" –means a document detailing the key activities to be performed in order to reduce as reasonably as practicable the hazards identified in any risk assessment;

"Principal contractor" means an employer appointed by the client to perform construction work;

"Risk Assessment" –means a program to determine any risk associated with any hazard at a construction site, in order to identify the steps needed to be taken to remove, reduce or control such hazard.

"National Building Regulations" means the National Building Regulations made under the National Building Regulations and Building Standards Act, 1977 (Act No. 103 of 1977), and promulgated by Government Notice No. R. 2378 of 30 July 1990, as amended by Government Notices No's R. 432 of 8 March 1991, R. 919 of 30 July 1999 and R. 547 of 30 May 2008;

"Structure" means—

(a) any building, steel or reinforced concrete structure (not being a building), railway line or siding, bridge, waterworks, reservoir, pipe or pipeline, cable, sewer, sewage works, fixed vessels, road, drainage works, earthworks, dam, wall, mast, tower, tower crane, bulk mixing plant, pylon, surface and underground tanks, earth retaining structure or any structure designed to preserve or alter any natural feature, and any other similar structure;

(b) any falsework, scaffold or other structure designed or used to provide support or means of access during construction work; or

(c) any fixed plant in respect of construction work which includes installation, commissioning, decommissioning or dismantling and where any construction work involves a risk of a person falling;

5. OCCUPATIONAL HEALTH & SAFETY MANAGEMENT

5.1 Organizational Structure of EHSMS Responsibilities

All responsibilities fall under the legal requirement of legal appointment letters – each responsible person must have an appointment letter.

ROLE	RESPONSIBILITIES
Client / Client Agent	The Client and/or its Agent shall ensure that the Principal Contractor, appointed in terms of Construction Regulation 5(1) (k), implements and maintains the agreed and approved Health and Safety Plan. Failure on the part of the Client or Agent to comply with this requirement will not relieve the Principal Contractor from any duties under the Act and Regulations.
CEO – Principal Contractor	The Chief Executive Officer of the Principal Contractor in terms of Section 16 (1) of the OHS Act to ensure that the Employer (as defined in the Act) complies with the Act. The pro forma Legal Compliance Audit may be used for this purpose by the Principal Contractor or his/her appointed contractor.
Person responsible for Health and Safety Section 16(2)	All OHS Act (85 /1993), Section 16 (2) appointee/s as detailed in their respective appointment forms shall regularly, in writing, report to management on health and safety matters or deviations identified during routine or ad hoc inspections/ audits. All reports shall be made available to the principal Contractor to become part of their site records (Health & Safety File).
Construction Manager Or Assistant	The Construction Manager and Assistant Construction Supervisor/s appointed in terms of Construction Regulation 8 shall regularly, in writing, report to their managers on health and safety matters or deviations identified during inspections. All reports shall be made available to the principal Contractor to become part of site records (Health & Safety File).
SHE Representatives	All Health and Safety Representatives (SHE-Reps) shall act and report as per Section 18 of the OHS Act. She Representatives shall inspect and monitor activities on a daily basis and report findings to the Client and Health and Safety manager immediately. These safety representatives have the right to stop any unsafe work or work due to unsafe conditions and report findings and reason immediately to _____ (Company Name) Management.
Other Legal Appointees	Further (Specific) Supervision Responsibilities for OH&S Several appointments or designations of responsible and /or competent people in specific areas of construction work are required by the OHS Act and Regulations The following competent appointments, where applicable, in terms of the Construction Regulations are required to ensure compliance to the Act, Regulations and Safety Standards.

LEGAL APPOINTMENTS AS REQUIRED IN THE CONSTRUCTION REGULATIONS			
item	Construction Regulation	Appointment	Appointment
1	5(1)(h)	Principal contractor for each phase or project	Client / Agent
2	6	Designer	Client / Agent
3	7(1)(c)(v)	Contractor	Principal Contractor
4	7(2)(c)	Sub-Contractor	Contractor
5	8(1)	Construction Manager	Principal Contractor
6	8(2)	Assistant Construction Manager	Principal Contractor
7	8(6)	Construction Safety Officer	Principal Contractor & Contractor
8	8(7)	Construction Supervisor	Principal Contractor & Contractor
9	8(8)	Assistant Construction Supervisor	Principal Contractor & Contractor
10	9(1)	Person to carry out risk assessment	Principal Contractor & Contractor
11	9(4)	Trainer/Instructor	Principal Contractor & Contractor
12	10(1)(a)	Fall protection officer	Principal Contractor & Contractor
13	11(2)	Competent structure inspector	Owner
14	6(2) & 12(1)	Temporary Works Designer	Principal Contractor & Contractor
15	12(2)	Temporary Works Supervisor	Principal Contractor & Contractor
16	13(2)(b)(ii)(bb)	Professional engineer or technologist	Principal Contractor & Contractor
17	14(1)	Supervisor demolition work	Principal Contractor & Contractor
18	14(2) + (3)	Demolition expert	Principal Contractor & Contractor
19	16(1)	Scaffold supervisor	Principal Contractor & Contractor
20	17(1)	Suspended platform supervisor	Principal Contractor & Contractor
21	17(2)(c)	Compliance plan developer	Principal Contractor & Contractor
22	17(8)(c)	Suspended platform expert	Principal Contractor & Contractor
23	17(13)	Outrigger expert	Principal Contractor & Contractor
24	19(8)(a)	Material hoist inspector	Principal Contractor & Contractor
25	18(1)(a)	Rope access supervisor	Principal Contractor & Contractor
26	20(1)	Bulk mixing plant supervisor	Principal Contractor & Contractor
27	20(2)	Bulk mixing plant operator	Principal Contractor & Contractor
28	22(a)	Tower crane supervisor	Principal Contractor & Contractor

29	22(e)	Tower crane operator	Principal Contractor & Contractor
30	23(1)(d)(i)	Construction vehicle and mobile plant operator	Principal Contractor & Contractor
31	23(1)(k)	Construction vehicle and mobile plant inspector	Principal Contractor & Contractor
32	24(d)	Temporary electrical installations inspector	Principal Contractor & Contractor
33	24 (e)	Temporary electrical installations controller	Principal Contractor & Contractor
34	28 (a)	Stacking and storage supervisor	Principal Contractor & Contractor
35	29 (h)	Fire equipment inspector	Principal Contractor & Contractor

This list may be used as a reference or tool to determine which components of the Act and Regulations would be applicable to a particular site, as was intended under paragraph 3 & 4 of the Chapter "Introduction" (page 4) above. This list shall not be assumed to be exclusive or comprehensive.

5.2. Communication & Liaison

5.2.1 Communication between the Employer, the Principal Contractor, Contractors, Project manager, the Designer and other concerned parties shall take place in the SHE Committee or Project meeting;

5.2.2 In addition to the above, communication may be directed to the Client or Client Agent, in writing, as and when the need arises;

5.2.3 The workforce may consult on Health and Safety matters with their Supervisor or She Representative;

5.2.4 The Principal Contractor shall be responsible for the dissemination of all relevant Health and Safety information to Contractors and other Contractors e.g. design changes agreed with the Client and its Agent; instruction issued by the Client agent, exchange of information between Contractors, the reporting of hazardous/dangerous conditions/situations etc.

6. INTERPRETATION

6.1 The Occupational Health and Safety Act and all its Regulations, with the exception of the Construction Regulations, distinguish between the roles, responsibilities and functions of employers and employees respectively. It views consultants and contractors as employees of the "owner" of a construction or operational project, the "owner" being regarded as the employer. Only if formally agreed to by way of the written agreement in this regard between the "owner(s)" and consultant and /or between the "owner(s)" and the contractor(s), will these assumptions be relinquished in favour of the position agreed upon between the relevant parties;

6.2 In terms of the Construction Regulations the **"owner",** in terms of its instructions, operates (has to operate) in the role of client as per relevant definition;

6.3 The **contractors** working for the "client" are seen to be in two categories, i.e. the Principal Contractor and Contractors. The Principal Contractor has to take full responsibility for the health and safety on the site of the relevant project / contract. This includes monitoring health and safety conditions and overseeing administrative measures required by the Construction Regulations from all contractors on the project site;

6.4 **Contractors** are required to operate under the control (in terms of all health and safety measures which are covered in the Construction Regulations) of the Principal Contractor. Where, for the work the contractor will have to execute himself, practical health and safety measures are applicable, he will also be subject to the relevant requirements with which Contractors have to comply. The Principal Contractor will, however, not have to actually fulfil such requirements in respect of any of the work / functions of any Contractors on the site for which he has been appointed as Principal Contractor. However, he has to monitor / oversee such processes, ensuring that the requirements are complied with and that the required appointments / evaluations / inspections / assessments and tests are done and that the records are duly generated and kept as prescribed in the Construction Regulations. This has to feature clearly in the Principal Contractor's Health and Safety Plan.

7. RESPONSIBILITIES

7.1 In terms of Construction regulation 5 a Client must-

1. (a) prepare a baseline risk assessment for an intended construction work project;
   (b) prepare a suitable, sufficiently documented and coherent site-specific health and safety specification for the intended construction work based on the baseline risk assessment contemplated in paragraph (a);
   (c) provide the designer with the health and safety specification contemplated in paragraph (b);
   (d) ensure that the designer takes the prepared health and safety specification into consideration during the design stage;
   (e) ensure that the designer carries out all responsibilities contemplated in regulation 6;
   (f) include the health and safety specification in the tender documents;
   (g) ensure that potential principal contractors submitting tenders have made adequate provision for the cost of health and safety measures;
   (h) ensure that the principal contractor to be appointed has the necessary competencies and resources to carry out the construction work safely;
   (i) take reasonable steps to ensure co-operation between all contractors appointed by the client to enable each of those contractors to comply with these Regulations;
   (j) ensure before any work commences on a site that every principal contractor is registered and in good standing with the compensation fund or with a licensed compensation insurer as contemplated in the Compensation for Occupational Injuries and Diseases Act, 1993 (Act No. 130 of 1993);

(k) appoint every principal contractor in writing for the project or part thereof on the construction site;

(l) discuss and negotiate with the principal contractor the contents of the principal contractor's health and safety plan contemplated in regulation 7(1), and must thereafter finally approve that plan for implementation;

(m) ensure that a copy of the principal contractor's health and safety plan is available on request to an employee, inspector or contractor;

(n) take reasonable steps to ensure that each contractor's health and safety plan contemplated in regulation 7(1)(a) is implemented and maintained;

(o) ensure that periodic health and safety audits and document verification are conducted at intervals mutually agreed upon between the principal contractor and any contractor, but at least once every 30 days;

(p) ensure that a copy of the health and safety audit report contemplated in paragraph (o) is provided to the principal contractor within seven days after the audit;

(q) stop any contractor from executing a construction activity which poses a threat to the health and safety of persons which is not in accordance with the client's health and safety specifications and the principal contractor's health and safety plan for the site;

(r) where changes are brought about to the design or construction work, make sufficient health and safety information and appropriate resources available to the principal contractor to execute the work safely; and

(s) ensure that the health and safety file contemplated in regulation 7(1)(b) is kept and maintained by the principal contractor.

(2) Where a client requires additional work to be performed as a result of a design change or an error in construction due to the actions of the client, the client must ensure that sufficient safety information and appropriate additional resources are available to execute the required work safely.

(3) Where a fatality or permanent disabling injury occurs on a construction site, the client must ensure that the contractor provides the provincial director with a report contemplated in section 24 of the Act, in accordance with regulations 8 and 9 of the General Administrative

Regulations, 2013, and that the report includes the measures that the contractor intends to implement to ensure a safe construction site as far as is reasonably practicable.

(4) Where more than one principal contractor is appointed as contemplated in sub-regulation (1)(k), the client must take reasonable steps to ensure co-operation between all principal contactors and contractors in order to ensure compliance with these Regulations.

(5) Where a construction work permit is required as contemplated in regulation 3(1), the client must, without derogating from his or her health and safety responsibilities or liabilities,

appoint a competent person in writing as an agent to act as his or her representative, and where such an appointment is made the duties that are imposed by these Regulations upon a client, apply as far as reasonably practicable to the agent so appointed.

(6) Where notification of construction work is required as contemplated in regulation 4(1), the client may, without derogating from his or her health and safety responsibilities or liabilities, appoint a competent person in writing as an agent to act as his or her representative, and where such an appointment is made the duties that are imposed by these Regulations upon a client, apply as far as reasonably practicable to the agent so appointed: Provided that, where the question arises as to whether an agent is necessary, the decision of an inspector is decisive.

(7) An agent contemplated in sub-regulations (5) and (6) must—

(a) manage the health and safety on a construction project for the client; and

(b) be registered with a statutory body approved by the Chief Inspector as qualified to perform the required functions;

(8) When the chief inspector has approved a statutory body as contemplated in sub regulation (7)(b), he or she must give notice of that approval in the Gazette.

7.2 Principal Contractor

a) The Principal Contractor shall accept the appointment under the terms and Conditions of Contract. The Principal Contractor shall sign and agree to those terms and conditions and shall, before commencing work, notify the Department of Labour of the intended construction work in terms of Regulation 3 of the Construction Regulations. Annexure B of this Specification contains a “Notification of Construction Work” form. The Principal Contractor shall submit the notification in writing prior to commencement of work and inform the Client or his Agent accordingly;

b) The Principal Contractor shall ensure that he is fully conversant with the requirements of this Specification and all relevant health and safety legislation. This Specification is not intended to supersede the Act nor the Construction Regulations or any part of either. Those sections of the Act and the Construction Regulations which apply to the scope of work to be performed by the Principal Contractor in terms of this contract (entirely or in part) will continue to be legally required of the Principal Contractor to comply with. The Principal Contractor will in no manner or means be absolved from the responsibility to comply with all applicable sections of the Act, the Construction Regulations or any Regulations proclaimed under the Act or which may perceivable be applicable to this contract;

c) (1) A principal contractor must further —

(a) provide and demonstrate to the client a suitable, sufficiently documented and coherent site specific health and safety plan, based on the client's documented

health and safety specifications contemplated in regulation 5(1)(b), which plan must be applied from the date of commencement of and for the duration of the construction work and which must be reviewed and updated by the principal contractor as work progresses;

(b) open and keep on site a health and safety file, which must include all documentation required in terms of the Act and these Regulations, which must be made available on request to an inspector, the client, the client's agent or a contractor; and

(c) on appointing any other contractor, in order to ensure compliance with the provisions of the Act—

(i) provide contractors who are tendering to perform construction work for the principal contractor, with the relevant sections of the health and safety specifications contemplated in regulation 5(1)(b) pertaining to the construction work which has to be performed;

(ii) ensure that potential contractors submitting tenders have made sufficient provision for health and safety measures during the construction process;

(iii) ensure that no contractor is appointed to perform construction work unless the principal contractor is reasonably satisfied that the contractor that he or she intends to appoint, has the necessary competencies and resources to perform the construction work safely;

(iv) ensure prior to work commencing on the site that every contractor is registered and in good standing with the compensation fund or with a licensed compensation insurer as contemplated in the Compensation for Occupational Injuries and Diseases Act, 1993;

(v) appoint each contractor in writing for the part of the project on the construction site;

(vi) take reasonable steps to ensure that each contractor's health and safety plan contemplated in sub regulation (2)(a) is implemented and maintained on the construction site;

(vii) ensure that the periodic site audits and document verification are conducted at intervals mutually agreed upon between the principal contractor and any contractor, but at least once every 30 days;

(viii) stop any contractor from executing construction work which is not in accordance with the client's health and safety specifications and the principal contractor's health and safety plan for the site or which poses a threat to the health and safety of persons;

(ix) where changes are brought about to the design and construction, make available sufficient health and safety information and appropriate resources to the contractor to execute the work safely; and

(x) discuss and negotiate with the contractor the contents of the health and safety plan contemplated in sub regulation (2)(a), and must thereafter finally approve that plan for implementation;

(d) ensure that a copy of his or her health and safety plan contemplated in paragraph (a), as well as the contractor's health and safety plan contemplated in sub regulation (2)(a), is available on request to an employee, an inspector, a contractor, the client or the client's agent;

(e) hand over a consolidated health and safety file to the client upon completion of the construction work and must, in addition to the documentation referred to in sub regulation (2)(b), include a record of all drawings, designs, materials used and other similar information concerning the completed structure;

(f) in addition to the documentation required in the health and safety file in terms of paragraph (c)(v) and sub regulation (2)(b), include and make available a comprehensive and updated list of all the contractors on site accountable to the principal contractor, the agreements between the parties and the type of work being done; and

(g) ensure that all his or her employees have a valid medical certificate of fitness specific to the construction work to be performed and issued by an occupational health practitioner in the form of Annexure 3.

(2) A contractor must prior to performing any construction work—

(a) provide and demonstrate to the principal contractor a suitable and sufficiently documented health and safety plan, based on the relevant sections of the client's health and safety specification contemplated in regulation 5(1)(b) and provided by the principal contractor in terms of sub regulation (1)(a), which plan must be applied from the date of commencement of and for the duration of the construction work and which must be reviewed and updated by the contractor as work progresses;

(b) open and keep on site a health and safety file, which must include all documentation required in terms of the Act and these Regulations, and which must be made available on request to an inspector, the client, the client's agent or the principal contractor;

(c) before appointing another contractor to perform construction work be reasonably satisfied that the contractor that he or she intends to appoint has the necessary competencies and resources to perform the construction work safely;

(d) co-operate with the principal contractor as far as is necessary to enable each of them to comply with the provisions of the Act; and

(e) as far as is reasonably practicable, promptly provide the principal contractor with any information which might affect the health and safety of any person at work carrying out construction work on the site, any person who might be affected by the work of such a person at work, or which might justify a review of the health and safety plan.

(3) Where a contractor appoints another contractor to perform construction work, the duties determined in sub regulation (1)(b) to (g) that apply to the principal contractor apply to the contractor as if he or she were the principal contractor.

(4) A principal contractor must take reasonable steps to ensure co-operation between all contractors appointed by the principal contractor to enable each of those contractors to comply with these Regulations.

(5) No contractor may allow or permit any employee or person to enter any site, unless that employee or person has undergone health and safety induction training pertaining to the hazards prevalent on the site at the time of entry.

(6) A contractor must ensure that all visitors to a construction site undergo health and safety induction pertaining to the hazards prevalent on the site and must ensure that such visitors have the necessary personal protective equipment.

(7) A contractor must at all times keep on his or her construction site records of the health and safety induction training contemplated in sub regulation (6) and such records must be made available on request to an inspector, the client, the client's agent or the principal contractor;.

(8) A contractor must ensure that all his or her employees have a valid medical certificate of fitness specific to the construction work to be performed and issued by an occupational health practitioner in the form of Annexure 3.

8. SITE SPECIFIC WORKS INFORMATION

These specifications are applicable to the specific **EXPLORATION AND INSTALLATION OF BOREHOLE AND BACKUP TANK FOR WHITTLESEA DEPOT** as detailed in the tender documents.

8.1. Employer's Objectives

To implement the planning, design, execution and close out stages for the **EXPLORATION AND INSTALLATION OF BOREHOLE AND BACKUP TANK FOR WHITTLESEA DEPOT.**

The specific primary objective of procuring the services of the PSP is to obtain full multi-disciplinary technical project implementation expertise and reporting support to the Department of Public Works & Infrastructure (Employer) regarding the implementation of the Project. This can be defined as providing support in the risk assessment, reassessment, design, construction supervision and close-out of facilities at the site, as determined by the Employer.

This includes taking full responsibility for the implementation of all identified work and related work to successfully complete and implement the project.

9. HEALTH AND SAFETY FILE

The Principal Contractor must, in terms of Construction Regulation 7(2) (b), keep a Health & Safety File on site at all times that must include all documentation required in terms of the Act and Regulations and must also include a list of all Contractors on site that are accountable to the Principal Contractor and the agreements between the parties and details of work being done. A more detailed list of documents and other legal requirements that must be kept in the Health and Safety File is attached as an addendum to this document.

IMPORTANT:

The Health and Safety File will remain the property of the Client and/or its Agent on its behalf throughout the period of the project and shall be consolidated and handed over to the Client and/or its Agent on its behalf at the time of completion of the project.

35. OH&S GOALS AND OBJECTIVES AND ARRANGEMENTS FOR MONITORING AND REVIEWING OH&S PERFORMANCE

The Principal Contractor is required to maintain an acceptable disabling incident frequency rate (DIFR) and report monthly on their performance to the Client or its Agent.

36. IDENTIFICATION OF HAZARDS AND DEVELOPMENT OF RISK ASSESSMENTS, STANDARD WORKING PROCEDURES (SWP) AND METHOD STATEMENTS

The Principal Contractor is required to perform risk assessments, compile Standard Working Procedures (SWP) and Method Statements for each activity executed in the contract or project (see “Project/Site Specific Requirements”).

The identification of hazards is over and above the hazards identification program and those hazards identified during the drafting of the Health and Safety Plan.

37. APPOINTMENT OF A FULLTIME/ PART TIME SAFETY OFFICER

The Principal Contractors will have to appoint a competent Construction H&S Officer as per the following criteria;

i. Number of employees onsite between 30 but below 50 – Part Time Safety Officer shall be appointed and will be onsite at least 2 days a week.

ii. Number of employees above 50 – Fulltime Safety Officer should be appointed.

iii. Should the project require a Construction Work Permit – a Fulltime Safety Officer should be appointed.

Further to the above criteria, should the Client or its Representative having considered the risks present and lack of compliance to the Occupational Health and

Safety Act, Act 85 of 1993 and its applicable Regulations the Client or its Representative may issue an instruction that a Part/ Full Time Construction Health and Safety Officer must be appointed, such a requirement will have to be met. Taking the Risk associated with this project into consideration it is deemed that a full time Safety Officer needs to be appointed and be present on site at all times.

38. CONSTRUCTION HEALTH & SAFETY AGENT (SACPCMP)

The construction Health & Safety Agent act as a link between the client, Principal Contractor andthe project team members with respect to health & Safety, They are required to ensure that the client carry out its H&S responsibilities in terms of Legislation as well as to co-ordinate and ensure good H&S practices are maintained throughout the duration of the project. In many cases this role starts from project Initiation to project close-out.

a) H&S competence*:* In the event that the client is unable to satisfy the requirements of the Construction Regulations for whatever reasons, the construction H&S agent may be appointed to perform these functions on behalf of the client. Given the need to appoint a registered construction H&S agent that is competent and adequately resourced with respect to H&S matters.

b) H&S goals*:* It is important that the construction H&S agents demonstrate clearly to clients how they are going to contribute to the achievement of any client H&S goals and objectives. They should also set their own H&S goals.

c) H&S responsibilities*:* Prior to accepting the H&S agent appointment from clients, H&S agents need to ensure that they brief clients fully on the client's particular responsibilities in terms of the OH&SA of 1993 and Construction Regulations as amended from time to time. In the absence of acceptance by clients of these responsibilities, H&S agents will not be able to adequately meet their own H&S responsibilities and duties.

d) H&S information: H&S agents must provide the designer or design team with all H&S information to enable them to conduct a design HIRA to identify the significant hazards that need to be included in the H&S specification. This information may be gathered from multiple sources such as, for example, discussion with the client, previous historical use of the site or facility, previous surveys and investigations and past H&S files.

e) The employer's health and safety agent shall:

- audit the contractor's compliance with the requirements of this specification prior to the commencement of any physical construction activities on the site;
- accept or reject the contractor's health and safety plans, giving reasons for rejecting such plans;
- monitor the effective implementation of all safety plans;
- conduct periodic and random audits on the health and safety file to establish compliance with the requirements of this specification;
- visit the site at regular intervals to conduct site inspections, and based upon such visits issue, wherever necessary, Improvement Notices, Contravention Notices and Prohibition Notices, to the contractor or any of the contractor's subcontractors with a copy to the contract manager and, where relevant, to the contractor.

f) The contractor shall invite the employer's health and safety agent to audit compliance with the requirements of this specification before commencing with any physical construction activity on the site.

g) Other duties of a H&S are to ensure that, where applicable, the following is attended to:

Tenderer's responsibility:

The tenderer (meeting the above criteria) must ensure that they attach a certified copy of the **SACPCMP** Certificate for a Registered Construction Manager together with their OHSE Plans.

39. RESPONSIBILITIES TOWARDS EMPLOYEES AND VISITORS

1. The contractor shall as far as is reasonably practicable, cause every employee to be made conversant with the hazards to his health and safety attached to any work which he has to perform, any article or substance which he has to produce, process, use, handle, store or transport and any plant or machinery which he is required or permitted to use, as well as with the precautionary measures which should be taken and observed with respect to those hazards or safe work procedures.
2. The contractor shall ensure that all employees under his or her control and the employees of his subcontractors who are performing construction work are:
   - informed, instructed and trained by a competent person regarding any hazard and the related work procedures before any work commences,

and thereafter at such times as may be determined in the risk assessment; and

- issued with proof of health and safety induction training issued by a competent person and carry proof of such induction when working on site.

3. The contractor shall cause a record of training to be kept which indicates the training dates, the names, identity numbers and job description of all those who attended such training and the name, identity number and competence of the person who provided the training..
4. The contractor shall not allow or permit any employee to enter the site, unless such person has undergone health and safety induction training pertaining to the hazards prevalent on the site at the time of entry.
5. The contractor shall ensure that each visitor to a construction site, save where such visitor only visits the site office and is not in direct contact with the construction work activities:
   a. undergoes health and safety instruction pertaining to the hazards prevalent on the site; an
   b. is provided with the necessary personal protective equipment.
   6. The contractor shall provide suitable on-site signage to alert workers and visitors to health and safety requirements. Such signage shall include but not be limited to:
   a. unauthorized entrance prohibited;
   b. signage to indicate what personal protective equipment is to be worn; and
   c. activity related signs.
7. The contractor shall not permit any person who is or who appears to be under the influence of intoxicating liquor or drugs, to enter or remain at aworkplace.

40. DESIGN OF TEMPORARY WORK

The contractor shall:

a) provide the health and safety agent with the names and contract particulars of the designers involved in the design of temporary works;
b) issue the designers with a copy of the health and safety specification as well as any pertinent information contained in the contract; and
c) provide the health and safety agent with certificates issued by the designer of the temporary works that such works are fit for purpose before such works are used in support construction activities

41. ARRANGEMENTS FOR MONITORING AND REVIEW

16.1. Periodical Audit by Principal Contractor/ Client or its Agent.

The Client and/or its Agent on its behalf will be conducting Periodic Audits at times agreed with the Principal Contractor to comply with Construction Regulation 7(1) (*c*) (vii) to ensure that the principal Contractor has implemented, is adhering to and is maintaining the agreed and approved OH&S Plan (audits must be done at least once every 30 days).

16.2. Other audits and inspections by client or agent.

The Client or its Agent reserves the right to conduct any ad hoc audits and inspections as it deems necessary.

A representative of the Principal Contractor and the relevant Health and Safety Representative(s) (SHE-Reps) must accompany the Client and/or its Agent on all Audits and Inspections and may conduct their own audit/inspection simultaneously. Each party will, however, take responsibility for the results of his/her own audit/inspection results. The Client or its Agent may request a copy of the Principle Contractor SHE Committee meeting minutes, reflecting possible recommendations made by that committee to the employer for reference purposes.

16.3. Incident Investigation and Reporting

16.3.1. The Principal Contractor shall report all incidents where an employee is injured on duty to the extent that he/she:

Dies;

becomes unconscious;

loses a limb or part of a limb;

is injured or becomes ill to such a degree that he/she is likely either to die or to suffer a permanent physical defect or likely to be unable for a period of at least 14 days either to work or continue with the activity for which he/she was usually employed.

or where:

a major incident occurred;

the health or safety of any person was endangered (this could be a near miss); where a dangerous substance was spilled;

the uncontrolled release of any substance under pressure took place;

machinery or any part of machinery fractured or failed resulting in flying, falling or uncontrolled moving objects;

machinery ran out of control.

to the Provincial Director of the Department of Labour within seven days and at the same time to the Client or its Agent.

Refer in this regard to Section 24 of the Act, Construction Regulation 5(3) & General Administrative Regulation 8.

16.3.2. The Principal Contractor is required to provide the Client and/or its Agent on its behalf with copies of all statutory reports required in terms of the Act and the Regulations;

16.3.3. The Principal Contractor is required to provide the Client and/or its Agent on its behalf with a monthly "SHE Risk Management Report";

16.3.4. The Principal Contractor is required to provide a.s.a.p. the Client and/or its Agent on its behalf with copies of all internal and external accident/incident investigation reports including the reports contemplated in clause 12.7, 12.8.2, 15, 16, 17, 21 and 22 below. As soon as the occurrence of any accident/incident of whatever nature comes to the notice of the Principal Contractor, it shall be reported immediately to any of the following:

Project Manager / Client / Agent; and Health and Safety Manager.

16.4. Review

The Principal Contractor is to review the Hazard Identification, Risk Assessments and Standard Work Processes at each Construction Planning and Progress Report meeting as the construction work develops and progresses. Each time changes are made to the designs, plans and construction methods and processes. These items must be reviewed;

The Principal Contractor must provide the Client and/or its Agent on its behalf, other Contractors and all other concerned parties with copies of any changes, alterations or amendments as contemplated in the above paragraph.

16.5. Site Rules and other Restrictions

16.5.1. Site OH&S Rules

The Principal Contractor must develop a set of site-specific Health and Safety Rules that will be applied to regulate the Health and Safety Plan and associated aspects of the construction project.

When required for a site by law, visitors and non-employees upon entering the site shall be issued with the proper Personal Protective Equipment (PPE) as and when necessary.

16.5.2. Security Arrangements

The Principal Contractor must establish site access rules and implement and maintain these throughout the construction period. Access control must include the rule that non-employees shall at all times be provided with fulltime supervision while on site;

Additional Access Rules may be imposed by the Project Manager or Client Agent in the interest of the safety of the DPW&I employees, visitors and customers;

The Principal Contractor must develop a set of Security rules and procedures for their allocated site and maintain these throughout the construction period. These security rules must be submitted to the Client for approval. Additional security measures or rules may be specified for risk minimisation purposes;
If not already tasked to the H&S Officer appointed in terms of Construction Regulation 8(6), the Principal Contractor must appoint a competent Emergency Controller who must develop contingency plans for any emergency that may arise on site as indicated by the risk assessments. These must include a monthly practice/testing programme for the plans e.g. January: trench collapse, February: flooding etc. and practiced/tested with all persons on site at the time, participating.

16.6. Training

The contents and syllabi of all training required by the Act and Regulations including any other related or relevant training as required must be included in the Principal Contractor's Health and Safety Plan and Health and Safety File.

16.6.1. General Induction Training

All employees of the Principal and other Contractors must be in possession of proof of General Induction training.

16.6.2. Site Specific Induction Training

All employees of the Principal and other Contractors must be in possession of Site Specific Occupational Health and Safety Induction or other qualifying training.

16.6.3. Other Training

All operators, drivers and users of construction vehicles, mobile plant and other equipment must be in possession of valid licenses and proof of training;
All employees performing jobs requiring specific training in terms of the OHS Act 85, 1993 and Regulations must submit proof of such training;
Occupational Health and Safety Training Requirements: (as required by the Construction Regulations and as indicated by the Health and Safety Specification Document & the Risk Assessment/s and recommendations by the Health and Safety Committee):

- General Induction (Section 8 of the Act & CR 7(5));

- Site/Job Specific Induction (also visitors) (Sections 8 & 9 of the Act & CR 7(5)&(6));
- Site/Project Manager;
- Construction Supervisor;
- OH&S Representatives (Section 18 (3) of the Act);
- Training of the Appointees indicated in 12.6.1 & 12.6.2 above;
- Operation of Cranes (Driven Machinery Regulations 18 (11);
- Operators & Drivers of Construction Vehicles & Mobile Plant (Construction Regulation 23);
- Basic Fire Prevention & Protection (Environmental Regulations 9 and Construction Regulation 29);
- As a minimum basic First Aid to be upgraded when necessary (General Safety Regulations 3);
- Storekeeping Methods & Safe Stacking (Construction Regulation 28);
- Emergency, Security and Fire Coordinator.

16.7. Incident Investigation

The Principal Contractor is responsible to oversee the investigation of all incidents. This will include first aid, medical treatment by a doctor and hospital or clinic cases. (General Administrative Regulation 9).

All incidents must be recorded in the Accident/Incident Register. (General Administrative Regulation 9).

The Principal Contractor is responsible for the investigation of all incidents as described in Section 24 (1) (b) & (c) of the Act and keeping a record of the results of such investigations including the corrective action to prevent similar incidents in future.

The Principal Contractor is responsible for the investigation of all road traffic accidents relating to the construction site and keeping a record of the results of such investigations including the steps taken to prevent similar accidents in future.

Notwithstanding the requirements of Section 24 of the Act, All incidents shall be investigated and reported on in writing, irrespective of whether such incident gave rise to injury or damage.

16.8. SHE Representatives and SHE Committees

16.8.1. Designation of SHE Representatives

Where the Principal Contractor employs more than 20 persons (including the employees of the Contractors) he has to appoint a minimum of one SHE Representatives, then he must appoint one for every 50 employees or part thereof. *(OHS Act85, 1993 - Section 17 and GAR 6; 7.);*

These SHE Representatives shall be designated in writing.

16.8.2. Duties and Functions of the H&S Representatives *(This is based on the Construction norms and is not an exhaustive list)*

The Principal Contractor must ensure that the designated SHE Representatives conduct a formal weekly inspection of their respective areas of responsibility using a checklist. All findings must be reported to the Principal Contractor. The reports shall be submitted to the Health and Safety Committee for action. Record shall be kept in the form of minutes;

SHE Representatives must take part in incident investigations;

SHE Representatives shall be members of at least one SHE Committee and attend all the SHE Committee meetings.

16.8.3. Establishment of H&S Committee(s)

The Principal Contractor must establish H&S Committees consisting of designated H&S Representatives together with a number of Employers Representatives appointed as per Section 19(3) that are not allowed to exceed the number of H&S Representatives on the committee. The persons nominated by the employer on an H&S Committee must be designated in writing for such period as may be determined by him. The H&S Committee shall co-opt advisory (temporary) members (who are not allowed to vote on issues discussed) and determine the procedures of the meetings including the chairmanship.

Legally, the H&S Committee must meet minimum every 3 months but it is advised that they meet at least once a month and consider, at least, the following Agenda for the *first meeting*. Thereafter the H&S Committee shall determine its own procedures as per the previous paragraph.

Agenda:

1) Opening and determining of chairmanship (only when necessary);
2) Facilities and Hygiene;
3) Housekeeping;
4) Incidents and incident investigation; and
5) Inspection checklists and Registers:
    a. H&S Rep. Inspections;
    b. Matters of First Aid;
    c. Scaffolding;
    d. Ladders;
    e. Portable Electric Equipment;
    f. Fire Equipment;
    g. Power Hand tools;
    h. Incident Investigation reports;
    i. Pressure Equipment and vessels under pressure;
    j. Personal Protective Equipment.
    k. Safety Statistics;
6) Health and Safety Awareness / Training / Posters and Symbolic signs;
7) First Aiders and First Aid equipment;

8) Demarcation of work- /hazardous-/safe areas/walkways;
9) Safety Suggestions;
10) Environmental Management;
11) General;
12) Date of Next Meeting; and
13) Closing.

17. PROJECT/SITE SPECIFIC REQUIREMENTS

The following is a list of specific activities and considerations that have been identified for the project and site and for which Risk Assessments, Standard Working Procedures (SWP), management and control measures and Method Statements (where necessary) have to be developed to ensure legal compliance to legislation:

Other

1. Project title sheet;
2. A depiction of total people on site daily;
3. A list of Sub-contractors active on site with contact details;
4. Plant and material listings;
5. Emergency contact numbers;
6. SHE files to note where all drawings, plans and permits are stored for all the disciplines involved in the construction phase of the project;
7. Chemical inventory with MSDS references;
8. First aid box and first aid arrangements;
9. Fire extinguisher(s);
10. Employee shaded eating area;
11. Communication board.

Task Activities undertaken in the execution of the above mentioned work packages, and must be addressed in the safety plan of the contractor.

Installation and Maintenance of Temporary Construction Electrical Supply, Lighting and Equipment;

Adjacent properties and surrounding building exposures; Boundaries and Access control/Public Liability Exposures; Exposure to Noise;

Exposure to Vibration;

Protection against dehydration and heat exhaustion; Protection from the elements.

Handling, Storage, removal and disposal of Asbestos Contaminated Material.

Use and Storage of Flammable Liquids and other Hazardous Substances – (the client and/or its agent appointed on its behalf to be informed of this prior to commencing of the project).

Protection against Flooding.

Protection from Overhead Power Lines.

As discovered by the Principal Contractor's hazard identification exercise.

As discovered from any inspections and audits conducted by the Client and/or its Agent on its behalf or by the Principal Contractor or any other Contractor on site. As discovered from any accident/incident investigation.

17.1. The following are in particular requirements depending on scope of works and will form a basis for compliance audits.

1) Administrative and Legal Requirements;
2) Education, Training & Promotion;
3) Public Safety and Emergency Preparedness;
4) Personal Protective Equipment;
5) Housekeeping;
6) Scaffolding, Formwork & Support work;
7) Ladders;
8) Electrical Safeguarding;
9) Emergency Procedures /Fire Prevention and Protection;
10) Excavations and Demolition;
11) Tools;
12) Cranes and other driven machinery;
13) Personnel and Material Hoists;
14) Transport and Materials Handling;
15) Site Plant and Machinery;
16) Stacking and Storage Site/ Yards/ Site Workshops Specifics;
17) Health and Hygiene; and
18) Facilities.

18. OUTLINED DATA, REFERENCES AND INFORMATION ON CERTAIN AND/OR SPECIFIC OBLIGATORY REQUIREMENTS TO ENSURE COMPLIANCE

Administrative & Legal Requirements

OHS Act Section/ Regulation	Subject	Requirements
Construction Regulations 3 & 4	Application for construction work permit Notice of carrying out Construction work	Department of Labour must be notified by the client and by the contractor. Copy of Notice available on Site. Work permit to be displayed at the entrance if required.
General Admin Regulations 4	Copy of OH&S Act (Act 85 of 1993)	Updated copy of Act & Regulations available on site readily available for perusal by employees.
COID Act Section 80	Registration with Compensation Insurer	Written proof of registration/Letter of good standing available on Site
Construction Regulations 5(1)	SHE Specification and Program	SHE Spec received from Client and/or its Agent SHE Program developed and updated.
Section 8(2)(d) of the OHS Act and	Hazard Identification & Risk Assessment	Identifications of hazards/Recorded

Regulations 5(1) & 7 of the Construction.		Risk Assessment and – Plan drawn up/Updated Risk Assessment Plan available on Site Employees/Contractors informed/trained
Section 16(2)	Assigned duties (Managers)	Responsibility of complying with the OH&S Act assigned to other person/s by CEO.
Construction Regulations 8(1)	Designation of Person Responsible on Site	Competent person appointed in writing as Construction Manager with job description
Construction Regulations 8(2)	Designation of Assistant for above	Competent person appointed in writing as Assistant Construction Manager with job description
Section 17 & 18 General Administrative Regulations 6 & 7	Designation of SHE Representatives	More than 20 employees - one H&S Representative, one additional H&S Rep. for each 50 employees or part thereof. Designation in writing, period and area of responsibility specified in terms of GAR 6 & 7 Meaningful H&S Rep. reports. Reports actioned by Management.
Section 19 & 20 General Administrative Regulations 5	Health & Safety Committee/s	SHE Committee/s established. All SHE Reps shall be members of SHE Committees Additional members are appointed in writing. Meetings held monthly, Minutes kept. Actioned by Management.
Section 37(1) & (2)	Agreement with Mandatories/ Contractors	Written agreement with Contractors List of Contractors displayed. Proof of Registration with Compensation Insurer/Letter of Good Standing (COID) Construction Manager designated Written arrangements regarding SHE Reps and Committee (OHSA Section 17,18)

		Written arrangements for First Aid (COID)
Section 24 & General Admin Regulations 8, Construction Regulation 5(3) & COID Act Sect.38, 39&41	Reporting of Incidents (Dept. of Labour)	Incident Reporting Procedure displayed. All incidents in terms of Sect. 24 reported to the Provincial Director, Department of Labour, within 3 days. (Annexure 1?)(WCL 1 or 2) and to the Client and/or its Agent on its behalf Cases of Occupational Disease Reported Copies of Reports available on Site Record of First Aid injuries kept
General Admin Regulations 9	Investigation and Recording of Incidents	All injuries which resulted in the person receiving medical treatment other than first aid, recorded and investigated by investigator designated in writing. Copies of Reports (Annexure 1) available on Site Tabled at H&S Committee meeting Action taken by Site Management.
Construction Regulations 10	Fall Prevention & Protection	Competent person appointed to draw up and supervise the Fall Protection Plan Proof of appointees competence available on Site Risk Assessment carried out for work at heights Fall Protection Plan drawn up/updated and available on Site
Construction Regulations 10(5)	Roof work	Competent person appointed to plan & supervise Roof work. Proof of appointees competence available on Site Risk Assessment carried out Roof work Plan drawn up/updated Roof work inspect before each shift. Inspection register kept

		Employees medically examined for physical & psychological fitness. Written proof on site
Construction Regulations 11	Structures	**Information re. the structure being erected received from the Designer including:** - geo-science technical report where relevant - the design loading of the structure - the methods & sequence of construction - anticipated dangers/hazards/special measures to construct safely Risk Assessment carried out Method statement drawn up All above available on Site Structures inspected before each shift. Inspections register kept
Construction Regulations 12	Temporary Works	Competent persons appointed in writing to: - Inspect structures - Ensure that design are followed
Construction Regulations 13	Excavations	Competent person/s appointed in writing to supervise and inspect excavation work Written Proof of Competence of above appointee/s available on Site Risk Assessment carried out Inspected: - before every shift - after any blasting - after an unexpected fall of ground - after any substantial damage to the shoring - after rain. Inspections register kept Method statement developed where explosives will be/ are used

Construction Regulations 14	Demolition Work	Competent person/s appointed in writing to supervise and control Demolition work Written Proof of Competence of above appointee/s available on Site Risk Assessment carried out Engineering survey and Method Statement available on Site Inspections to prevent premature collapse carried out by competent person before each shift. Inspection register kept
Construction Regulations 15	Tunneling	No people permitted to enter a tunnel if which has a height dimension of less than 800 millimetres
Construction Regulations 16	Scaffolding	**Competent persons appointed in writing to:** - erect scaffolding (Scaffold Erector/s) - act as Scaffold Team Leaders - inspect Scaffolding weekly and after inclement weather (Scaffold Inspector/s) Written Proof of Competence of above appointees available on Site Copy of SABS 085 available on Site Risk Assessment carried out Inspected weekly/after bad weather. Inspection register/s kept
Construction Regulations 17	Suspended Platforms	Competent persons appointed in writing to: - control the erection of Suspended platforms - act as Suspended platforms Team Leaders - inspect Suspended Scaffolding weekly and after inclement weather Risk Assessment conducted Certificate of Authorization issued by a registered professional engineer available on Site/copy forwarded to

		the Department of Labour The following inspections of the whole installation carried out by a competent person - after erection and before use - daily prior to use. Inspection register kept The following tests to be conducted by a competent person: - load test of whole installation and working parts every three months - hoisting ropes/hooks/load attaching devices quarterly Tests log book kept Employees working on Suspended Platform medically examined for physical & psychological fitness. Written proof available
Construction Regulations 18	Rope Access Work	**Competent person appointed in writing** as a rope access supervisor to supervise the activities. Operators must be licensed to carry out their work. A site specific fall protection plan must be available to the specific site and environment.
Construction Regulations 19	Materials Hoist	Competent person appointed in writing to inspect the Material Hoist Written Proof of Competence of above appointee available on Site. Materials Hoist to be inspected weekly by a competent person. Inspections register kept.
Construction Regulations 20	Bulk Mixing Plants	**Competent person appointed** to control the operation of the Batch Plant and the service, maintenance and cleaning. Register kept of above Risk Assessment carried out Batch Plant to be inspected weekly by a competent person.

		Inspections register kept
Construction Regulations 21	Explosive actuated fastening device	**Competent person appointed** to control the issue of the Explosive Powered Tools & cartridges and the service, maintenance and cleaning. Register kept. Empty cartridge cases/nails/fixing bolts returns recorded Cleaned daily after use Work areas are demarcated!
Construction Regulations 22/ Driven Machinery Regulations 18 & 19	Cranes & Lifting Machines Equipment	Competent person appointed in writing to inspect Cranes, Lifting Machines & Equipment Written Proof of Competence of above appointee available on Site. Cranes & Lifting tackle identified/numbered Register kept for Lifting Tackle Log Book kept for each individual Crane Inspection: - All cranes - daily by operator - Tower Crane/s - after erection/6monthly - Other cranes - annually by comp. person - Lifting tackle(slings/ropes/chain slings etc.) - daily or before every new application
Construction Regulations 24/Electrical Machinery Regulations 9 & 10/ Electrical Installation Regulations	Inspection & Maintenance of Electrical Installation & Equipment (including portable electrical tools)	Competent person appointed in writing to inspect/test the installation and equipment. Written Proof of Competence of above appointee available on Site. Inspections: - Electrical Installation & equipment inspected after installation, after alterations and quarterly. Inspection Registers kept Portable electric tools, electric lights and extension leads

		must be uniquely identified/numbered. Weekly visual inspection by User/Issuer/Storeman. Register kept.
Construction Regulations 25	Use of temporary storage of flammable liquids on construction site	Flammable liquids must be stored in a way that it does not cause a fire or explosion hazard, and that the workplace is well ventilated. Suitable notices to be posted.
Construction Regulations 26	Water environments	If construction is performed over on in close proximity of water, then provision must be made to prevent persons from falling into water and have a rescue plan in case of such incident happening to prevent drowning.
Construction Regulations 27	Housekeeping	Suitable housekeeping measures must be implemented to reduce the risk of injuries and damage to the structures, machinery, etc. Debris must be removed with a chute from a high place. Construction area must be fenced off.
Construction Regulations 28/ General Safety Regulations 8(1)(a)	Designation of Stacking & Storage Supervisor.	Competent Person/s with specific knowledge and experience designated to supervise all Stacking & Storage Written Proof of Competence of above appointee available on Site
Construction Regulations 29/ Environmental Regulation 9	Designation of a Person to Co-ordinate Emergency Planning and Fire Protection	Person/s with specific knowledge and experience designated to co-ordinate emergency contingency planning and execution and fire prevention measures Emergency Evacuation Plan developed: - Drilled/Practiced -Plan & Records of Drills/Practices available on Site Fire Risk Assessment carried out

		All Fire Extinguishing Equipment identified and on register. Inspected weekly. And inspection register kept. Serviced annually
Construction Regulations 30	Employees Facilities	The contractor must provide and maintain in hygienic condition facilities for employees that include: Showers (1 for every 15 employees) Sanitary facilities for each sex (1 for every 30 employees) Changing facilities for each sex Sheltered eating areas
General Safety Regulations 3	First Aid	Every workplace provided with sufficient number of First Aid boxes. (Required where 5 persons or more are employed) First Aid freely available Equipment as per the list in the OH&S Act. One qualified First Aider appointed for every 50 employees. (Required where more than 10 persons are employed) List of First Aid Officials and Certificates Name of person/s in charge of First Aid box/es displayed. Location of First Aid box/es clearly indicated. Signs instructing employees to report all Injuries/illness including first aid injuries
General Safety Regulations 2	Personal Safety Equipment (PPE)	PPE Risk Assessment carried out Items of PPE prescribed/use enforced Records of Issue kept Undertaking by Employee to use/wear PPE. PPE remains property of Employer, and is not to be removed from the premises GSR 2(4)
General Safety Regulations 9	Inspection & Use of Welding/Flame Cutting	Competent Person/s with specific knowledge and

	Equipment	experience designated to Inspect Electric Arc, Gas Welding and Flame Cutting Equipment Written Proof of Competence of above appointee available on Site All new vessels checked for leaks, leaking vessels NOT taken into stock but returned to supplier immediately Equipment identified/numbered and entered into a register Equipment inspected weekly. Inspection Register kept Separate, purpose made storage available for full and empty vessels
Hazardous Chemical Substances (HCS) Regulations Construction Regulations 25	Control of Storage & Usage of HCS and Flammables	Competent Person/s with specific knowledge and experience designated to Control the Storage & Usage of HCS (including Flammables) Written Proof of Competence of above appointee available on Site Risk Assessment carried out Register of HCS kept/used on Site Separate, purpose made storage available for full and empty containers
Pressure Equipment Regulations	Pressure Equipment	Competent Person/s with specific knowledge and experience designated to supervise the use, storage, maintenance, statutory inspections & testing of Pressure Equipment. Written Proof of Competence of above appointee available on Site Risk Assessment carried out Certificates of Manufacture available on Site Register of Pressure Equipment on Site Inspections & Testing by Approved Inspection Authority (AIA):

		-after installation/re-erection or repairs -every 36 months. -Register/Log kept of inspections, tests. Modifications & repair
Construction Regulations 23	Construction Vehicles and Earth Moving Equipment	Operators/Drivers appointed to: -Carry out a daily inspection prior to use -Drive the vehicle/plant that he/she is competent to operate/drive Written Proof of Competence of above appointee available on Site. Record of Daily inspections kept
General Safety Regulations 13A	Inspection of Ladders	Competent person appointed in writing to inspect Ladders Ladders inspected at arrival on site and weekly thereafter. Inspections register kept. Application of the types of ladders (wooden, aluminum etc.) regulated by training and inspections and noted in register
General Safety Regulations 13B	Ramps	Competent person appointed in writing to Supervise the erection & inspection of Ramps. Inspection register kept. Daily inspected and noted in register
Asbestos Regulations 2 - 21	Handling, storage, transportation	All applicable requirements as per scope of work; Asbestos regulations 2 - 21

Education & Training

Subject	Requirement
Company OH&S Policy Section 7(1)	Policy signed by CEO and published/Circulated to Employees Policy displayed on Employee Notice Boards Management and employees committed.
Company/Site SHE Rules (Section 13(a)	Rules published Rules displayed on Employee Notice Boards Rules issued and employees effectively informed or trained: written proof Follow-up to ensure employees understand/adhere to the policy and rules.

Induction & Task Safety Training (Section 13(a)	All new employees receive SHE Induction Training. Training includes Task Safety Instructions. Employees acknowledge receipt of training. Follow-up to ensure employees understand/adhere to instructions.
General SHE Training (Section 13(a)	All current employees receive specified SHE training: written proof Operators of Plant and Equipment receive specified training Follow-up to ensure employees understand/adhere to instructions.

Public Safety, Security Measures & Emergency Preparedness

Subject	Requirement
Notices &Signs	Notices & Signs at entrances / along perimeters indicating "No Unauthorized Entry". Notices & Signs at entrance instructing visitors and non - employees what to do, where to go and where to report on entering the site/yard with directional signs. e.g. "Visitors to report to Office" Notices & Signs posted to warn of overhead work and other hazardous activities. e.g. General Warning Signs
Site Safeguarding	Nets, Canopies, Platforms, Fences etc. to protect members of the public passing / entering the site.
Security Measures	Access control measures/register in operation Security patrols after hours during weekends and holidays Sufficient lighting after dark
Emergency Preparedness	Guard has access to telephone/ mobile/other means of emergency communication Emergency contact numbers displayed and made available to Security & Guard Emergency Evacuation instructions posted up on all notice boards (including employees' notice boards) Emergency contingency plan available on site/in yard Doors open outwards/unobstructed Emergency alarm audible all over (including in toilets)
Emergency Drill and Evacuation	Adequate No. of employees trained to use Fire Fighting Equipment. Emergency Evacuation Plan available, displayed and practiced.

Personal Protective Equipment

Subject	Requirement
PPE needs analysis	Need for PPE identified and prescribed in writing. PPE remain property of Employer, not to be removed from premises GSR 2(4)
Head Protection	All persons on site wearing Hardhats including Contractors and Visitors (where prescribed)
Foot Protection	All employees on site wearing Safety Footwear including Gumboots for concrete / wet work and non-slip shoes for roof work. Visitors to wear same upon request or where prescribed

Eye and Face Protection	Eye and Face (also Hand and Body) Protection (Goggles, Face Shields, Welding Helmets etc.) used when operating the following: Jack/ Kango Hammers Angle / Bench Grinders Electric Drills (Overhead work into concrete / cement / bricks Explosive Powered tools Concrete Vibrators / Pokers Hammers & Chisels Cutting / Welding Torches Cutting Tools and Equipment Guillotines and Benders Shears Sanders and Sanding Machines CO2 and Arc Welding Equipment Skill / Bench Saws Spray Painting Equipment etc.
Hearing Protection	Hearing Protectors (Muffs, Plugs etc.) used when operating the following: Jack / Kango Hammers Explosive Powered Tools Wood/Aluminum Working Machines e.g. saws, planers, routers
Hand Protection	Protective Gloves worn by employees handling / using: Cement / Bricks / Steel / Chemicals Welding Equipment Hammers & Chisels Jack / Kango Hammers etc.
Respiratory Protection	Suitable/efficient prescribed Respirators worn correctly by employees handling / using: Dry cement Dusty areas Hazardous chemicals Angle Grinders Spray Painting etc.
Fall Prevention Equipment	Suitable Safety harnesses / Fall Arrest Equipment correctly used by persons working on / in unguarded, elevated positions e.g.: Scaffolding Riggers Lift shafts Edge work Ring beam edges etc. Other methods of fall prevention applied e.g. catch nets
Protective Clothing	All jobs requiring protective clothing (Overalls, Rain Wear, Welding Aprons etc.) Identified and clothing worn. Disposable overalls when Asbestos is handled.
PPE Issue & Control	Identified Equipment issued free of charge. All PPE maintained in good condition. (Regular checks). Workers instructed in the proper use & maintenance of PPE. Commitment obtained from wearer accepting conditions and to wear the PPE. Record of PPE issued kept on H&S File. PPE remain property of Employer, not to be removed from premises GSR 2(4)

Housekeeping

Subject	Requirement
Scrap Removal System	All items of Scrap/Unusable Off-cuts/Rubble and redundant material removed from working areas on a regular basis. (Daily) Scrap/Waste removal from heights by chute/hoist/crane. Nothing thrown/swept over sides. Scrap disposed of in designated containers/areas Removal from site/yard on a regular basis.
Stacking & Storage (See Section 1 for Designation & Register)	Stacking: * Stable, on firm level surface/base. * Prevent leaning/collapsing * Irregular shapes bonded * Not exceeding 3x the base * Stacks accessible * Removal from top only. Storage: * Adequate storage areas provided. * Functional – e.g. demarcated storage areas/racks/bins etc. * Special areas identified and demarcated e.g. flammable gas, cement etc. * Neat, safe, stable and square. * Store/storage areas clear of superfluous material. * Storage behind sheds etc. neat/under control. * Storage areas free from weeds, litter etc.
Waste Control/Reclamation	Re-usable off-cuts and other re-usable material removed daily and kept to a minimum in the work areas. All re-usable materials neatly stacked/stored in designated areas. (Nails removed/bent over in re-usable timber). Issue of hardware/nails/screws/cartridges etc. controlled and return of unused items monitored.
Asbestos contaminated material (waste)	On site storage prior removal of this material must be advised by a registered Asbestos Contractor. Asbestos contaminated material must be removed from the site by a company registered for handling and transportation of Asbestos, certificate of accreditation to be obtained from the owner. This material must be disposed of on sites specifically designated for this purpose.
Contractors (Housekeeping)	Contractors required to comply with Housekeeping requirements.

Working at Heights (including roof work)

Subject	Requirement
Openings	Unprotected openings adequately guarded/fenced/barricaded/catch nets installed
Roof work	Roof work discontinued when bad/hazardous weather Fall protection measures (including warning notices) when working close to edges or on fragile roofing material Covers over openings in roof of robust construction/secured against displacement

Scaffolding / Formwork / Support Work

Subject	Requirement
Access/System Scaffolding	Foundation firm / stable Sufficient bracing. Tied to Structure/prevented from side or cross movement Platform boards in good condition/sufficient/secured. Handrails and toe boards provided. Access ladders / stairs provided. Area/s under scaffolding tidy. Safe/unsafe for use signs Complying with OH&S Act/SABS 085
Free Standing Scaffolding	Foundation firm / stable Sufficient bracing. Platform boards in good condition/sufficient/secured. Handrails and toe boards provided. Access ladders / stairs provided. Area/s under scaffolding tidy. Safe/unsafe for use signs Height to base ratio correct Outriggers used /tied to structure where necessary Complying with OH&S Act/SABS 085
Mobile Scaffolding	Foundation firm / stable Sufficient bracing. Platform boards in good condition/sufficient/secured. Handrails and toe boards provided. Access ladders / stairs provided. Area/s under scaffolding tidy. Safe/unsafe for use signs
Mobile Scaffolding	Wheels / swivels in good condition Brakes working and applied. Height to base ratio correct. Outriggers used where necessary Complying with OH&S Act/SABS 085
Suspended Scaffolding	Outriggers securely supported and anchored. Correct No. of steel wire ropes used. Platform as close as possible to the structure. Handrails on all sides All winches / ropes / cables / brakes inspected regularly and replaced as prescribed Scaffolding complies with OHS Act (Act 85/93) Winch(es) maintained by competent person(s)
Formwork / Support Work	All components in good condition. Foundation firm / stable. Adequate bracing / stability ensured. Good workmanship / uprights straight and plumb. Good cantilever construction. Safe access provided. Areas under support work tidy. Same standards as for system scaffolding.

Special Scaffolding	Special Scaffolding e.g. Cantilever, Jib and Truss-out scaffolds erected to an acceptable standard and inspected by specialists.
Edges & Openings	Edges barricaded to acceptable standards. Manhole openings covered / barricaded. Openings in floor / other openings covered, barricaded/fenced. Stairs provided with handrails. Lift shafts barricaded / fenced off.

Ladders

Subject	Requirement
Physical Condition / Use & Storage	Stepladders - hinges/stays/braces/stiles in order. Extension ladders - ropes/rungs/stiles/safety latch/hook in order. Extension / Straight ladders secured or tied at the bottom / top. No joined ladders used Wooden ladders are never painted except with varnish Aluminum ladders NOT to be used with electrical work All ladders stored on hooks / racks and not on ground. Ladders protrude 900 mm above landings / platforms / roof. Fixed ladders higher than 5 m have cages/Fall arrest system

Electricity (as part of, or additional to the manual "Safety & Switching Procedures for Electrical Installations" - see attached document)

Subject	Requirement
Electrical Distribution Boards & Earth Leakage	Color coded / numbered / symbolic sign displayed. Area in front kept clear and unobstructed. Fitted with inside cover plate / openings blanked off / no exposed "live" conductors /terminals/Door kept close Switches / circuit breakers identified. Earth leakage protection unit fitted and operating. Tested with instrument: Test results within 15 – 30 milliamps Aperture/Opening/s provided for the plugging in and removal of extension leads without the need to open the door Apertures and openings used for extension leads to be protected against the elements and especially rain.
Electrical Installations & Wiring	Temporary wiring / extension leads in good condition / no bare or exposed wires. Earthing continuity / polarity correct: Looking at the open connectors to connect the wiring, the word "Brown" has the letter 'R' in it, so the b'R'own wire connects to the 'R'ight hand connector. "Blue" has the letter 'L' in it, so the b'L'ue wire connects to the 'L'eft hand connector. Cables protected from mechanical damage and moisture. Correct loading observed e.g. no heating appliance used from lighting circuit etc. Light fittings/lamps protected from mechanical damage/moisture. Cable arrestors in place and used inside plugs
Physical condition of Electrical Appliances & Tools	Electrical Equipment and Tools: (includes all items plugging in to a 16 Amp supply socket) Insulation / casing in good condition. Earth wire connected/intact where not of double insulated design Double insulation mark indicates that no earth wire is to be connected. Cord in good condition/no bare wires/secured to machine & plug. Plug in good condition, connected correctly and correct polarity.

Emergency and Fire Prevention and Protection

Subject	Requirement
Fire Extinguishing Equipment	Fire Risks Identified and on record The correct and adequate Fire Extinguishing Equipment available for: Offices General Stores Flammable Store Fuel Storage Tank/s and catchment well Gas Welding / Cutting operations Where flammable substances are being used / applied. * Equipment Easily Accessible
Maintenance	Fire equipment checked minimum monthly, serviced yearly
Location & Signs	Fire Extinguishing Equipment: Clearly visible Unobstructed Signs posted including “No Smoking” / “No Naked Lights” where required. (Flammable store, Gas store, Fuel tanks etc.)
Storage Issue & Control of Flammables (incl. Gas cylinders	Storage Area provided for flammables with suitable doors, ventilation, bund etc. Flammable store neat / tidy and no Class A combustibles. Decanting of flammable substances carried out in ignition free and adequately ventilated area. Container bonding principles applied Only sufficient quantities issued for one task or one day’s usage Separate, special gas cylinder store/storage area. Gas Cylinders stored / used / transported upright and secured in trolley/cradle/structure and ventilated. Types of Gas Cylinders clearly identified as well as the storage area and stored separately. Full cylinders stored separately from empty cylinders. All valves, gauges, connections, threads of all vessels to be checked regularly for leaks. Leaking acetylene vessels to be returned to the supplier IMMEDIATELY.
Storage, Issue & Control of Hazardous Chemical Substances (HCS)	HCS storage principles applied: products segregated Only approved, non-expired HCS to be used Only the prescribed PPE shall be used as the minimum protection Provision made for leakage/spillage containment and ventilation Emergency showers/eye wash facilities provided HCS under lock & key controlled by designated person Decanted/issued in containers as prescribed with information/warning labels Disposal of unwanted HCS by accredited disposal agent No dumping or disposal of any HCS on or inside the storage area or anywhere else on the project site All vessels or containers to be regularly checked for leaks

Tools

Subject	Requirement
Hand Tools	Shovels / Spades / Picks: Handles free from cracks and splinters Handles fit securely Working end sharp and true Hammers: Good quality handles, no pipe or reinforcing steel handles. Handles free from cracks and splinters Handles fit securely

	Chisels: No mushroomed heads / heads chamfered Not hardened Cutting edge sharp and square Saws: Teeth sharp and set correctly * Correct saw used for the job
Explosive Powered Tools.	Only used by trained / authorized personnel. Prescribed warning signs placed / displayed where tool is in use. Work area must be properly isolated/demarcated during use of tool. Inspected at least monthly by competent person and results recorded. Issue and return recorded including cartridges / nails and unused cartridges / nails /empty shells recorded. Cleaned daily after use.

Cranes

Subject	Requirement
Tower Crane	Only operated by trained authorized operator with valid certificate of training Structure - no visible defects Electrical installation good/safe Crane hook: Throat pop marked/safety latch fitted/functional SWL/MML displayed Limit switches with backup switches fitted/operational Access Ladder fitted with backrests/Fall arrest system installed Lifting tackle in good condition/inspection color coding Lifting tackle checked daily
Mobile Crane	Only operated by trained authorized operator with valid certificate of training Rear view mirrors Windscreen visibility good Windscreen wipers operating effectively Indicators operational Hooter working Tyres safe/sufficient tread/pressure visibly sufficient No missing Wheel nuts Headlights, taillights operational Reverse alarm working and audible and known by all employees
Mobile Crane continued	Grease nipples and grease on all joints No Oil leaks Hydraulic pipes visibly sound/no leaks No corrosion on Battery terminals Boom visibly in good condition/no apparent damage Cable/sheaves greased/no visible damage/split wires/corrosion and checked daily Brakes working properly Crane hook: Throat pop marked/safety latch fitted/functional SWL/MML displayed By-pass valves operational Deflection chart displayed/visible to operator/driver

	Outriggers functional used
Gantry Crane	Only operated by trained authorized persons Correct slinging techniques used Recognized/displayed on chart signals used Log book kept/up to date Prescribed inspections conducted on crane &lifting tackle and checked daily "Crane overhead" signage, where applicable Crane hook: Throat pop marked/safety latch fitted/functional SWL/MML displayed/load limiting switches fitted/operational

Builder's Hoist

Subject	Requirement
Builder's Hoist	"Hoist In Operation" - sign displayed. General construction strong and free from patent defects. Tower: * Adequately secured / braced. * At least 900 mm available for over travel. * Barricaded at least 2 100 mm high at ground level and floors. * Landing place provided with gate at least 1 800 high. Platform: * No persons conveyed on platform * Steel wire ropes with breaking strength of six times max. load. * Signal systems used which may include two way radio connection. * Goods prevented from moving / falling off. * Effective brake capable of stopping and holding max. load.

Transport & Materials Handling Equipment

Subject	Requirement
Site Vehicles	All Site Vehicles, Dumpers, Bobcats, Loaders etc.; checked daily before use by driver /operator. Inventory of vehicles used/operated on site Inspection by means of a checklist / results recorded. No persons riding on equipment not designed or designated for passengers. Site speed limit posted, enforced and not exceeded. Drivers / Operators trained / licensed and carrying proof. No unauthorized persons allowed to drive / operate equipment.
Conveyors	Conveyor belt nip points and drive gear guarded. Emergency stop/lever/brake fitted, clearly marked & accessible and tested to be functional under full load.

Site Plant and Machinery

Subject	Requirement
Brick Cutting Machine	Operator Trained. Only authorized persons use the machine. Emergency stop switch clearly marked and accessible. Area around the machine dry and slip/trip free/clear of off-cuts All moving drive parts guarded/electrical supply cable protected Operator using correct PPE - eye/face/hearing/foot/hands/body.
Electric Arc Welder	Welder Trained. Only authorized / trained persons use welder. Earth cable adequately earthed to work.

	Electrode holder in good condition/safe Cables, clamps & lugs/connectors in good condition. Area in which welding machine is used is dry/protected from wet. Welder using correct PPE - eye/ face/foot/body/respirator. Correct transparent screens & warning signs placed
Woodworking Machines	Operators Trained. Only authorized persons use machines. Provided with guards. Guards used. Operators using correct PPE - eye/face/feet/hearing Circular saws strictly operated according to prescribed methods and settings Only prescribed saw blades (cross-cut, ripping blade, smooth cut, aluminum) shall be used for various applications
Compressors	Relief valves correctly set and locked / sealed. Maximum Safe Working Pressure (MSWP) indicated on face of pressure gauge: not on glass cover. All drives adequately guarded. Receiver/lines drained daily Hoses good condition/clamped, not wired Compressed air NEITHER used to dust off clothing/PPE/ and work areas NOR on bare skin.
Concrete Mixer / Batch Plant	Top platform provided with guardrails. Dust abatement methods in use. Operators using correct PPE - eye / hands / respirators. All moving drive parts guarded. Emergency stops identified / indicated and accessible. Area kept clean/dry/and free from tripping and slipping hazards. Operator's overseer identified and crane signals displayed and used.
Gas Welding / Flame Cutting Equipment	Only authorized/trained persons use the equipment. Torches and gauges in good condition. Flashback arrestors fitted at cylinders and gauges. Hoses in good condition/correct type/all connections with clamps. Cylinders stored, used and transported in upright position, secured in trolley / cradle / to structure. All cylinders regularly checked for leaks, leaking cylinders returned immediately. Fire prevention/control methods applied/hot work permits.

Plant & Storage Yards/Site Workshops Specifics

Subject	Requirements
Section 8(2)(1) General Machinery Regulation 2(1): Supervision of the Use & Maintenance of Machinery	Person/s with specific knowledge and experience designated in writing to supervise the Use & Maintenance of Machinery. Critical items of Machinery identified/numbered/placed on register/inventory. Inspection/maintenance schedules for abovementioned. Inspections/maintenance carried out to above schedules. Results recorded.
General Machinery Regulation 9(2): Notices re. Operation of Machinery	Schedule D Notice posted in Work areas.
Pressure Equipment Regulation 13(1)(b): Supervision of the Use & Maintenance of Vessels	Person/s with specific knowledge and experience designated in writing to supervise the use & Maintenance of Pressure Equipment. Pressure Equipment identified/numbered/placed on register/Manufacturers plate intact.

under Pressure or Pressure Equipment	Inspection/maintenance carried out according to schedule. Results recorded/Test certificates available.
Lock-out Procedure	Lock-out procedure in operation
Ergonomics	Ergonomics survey conducted – results on record. Survey results applied.
Demarcation & Color Coding	Demarcation principles applied All services, pipes, electrical installation, stop-start controls, emergency controls etc. colour coded to own published or SABS standard Employees trained to identify colour coding
Portable & Bench Grinders	Area around grinder clear/trip/slip free Bench grinders mounted securely/grinder generally in good condition/No excessive vibration On/Off switch/button clearly demarcated/accessible Adequate guards in place Tool rest – secure/square/max. 2 mm gap, perpendicular to drive shaft Stone/disk - correct type and size/mounted correctly/dressed Use of Eye protection enforced
Battery Storage & Charging	Adequately ventilated, ignition free room/area/no smoking sign/s Batteries placed on rubber/wooden surface Emergency shower/eye wash provided No acid storage in area Prescribed methods in place and adhered to when charging batteries
Ancillary Lifting Equipment	Chain Blocks/Tirfors/jacks/mobile gantries etc. identified/ numbered on register Chains in good condition/links no excessive wear/checked daily Lifting hooks – throat pop marked/safety latch fitted SWL/MML marked/displayed
Presses/Guillotines/ Shears	Only operated by trained/authorised persons Interlocks/lock-outs fitted/PPE worn or used at all times

Workplace Environment, Health and Hygiene

Subject	Requirement
Lighting	Adequate lighting in places where work is being executed e.g. stairwells and basements. Light fittings placed / installed causing no irritating/blinding glare. Stroboscopic effect eliminated (not only reduced) where moving objects or machinery is used
Ventilation	Adequate ventilation / extraction / exhausting in hazardous areas e.g. chemicals / adhesives / welding / petrol or diesel/ motors running and in confined spaces / basements.
Noise	Tasks identified where noise levels exceeds 85 dB at any one time. All reasonable steps taken to reduce noise levels at the source. Hearing protection used where noise levels could not be reduced to below 85 dB.
Heat Stress	Measures in place to prevent heat exhaustion in heat stress problem areas e.g. steel decks, when the WBGT index reaches 30. (See Environmental Regulation 4) Cold drinking water readily available at all times.
Ablutions	Sufficient hygiene facilities provided - 1 toilet per 30 employees (National Building Regulations prescribe chemical toilets for Construction sites) Toilet paper available. Sufficient showers provided. Facilities for washing hands provided. Soap/cleaning agent available for washing hands. Means of drying hands available.

	Lock-up changing facilities / area provided. Ablution facilities kept hygienic and clean.
Eating / Cooking Facilities	Adequate storage facilities provided. Weather protected eating area provided, separate from changing area. Refuse bins with lids provided. Facilities kept clean and hygienic.
Pollution of Environment	Measures in place to minimize dust generation. Accumulation or littering of empty cement pockets, plastic wrapping / bags, packing materials etc. prevented. Spillage / discarding of oil, chemicals and dieseline into storm water and other drains or into existing or newly dug holes/cavities on site expressly prohibited.
Hazardous Chemical Substances	All substances identified and list available e.g. acids, flammables, poisons etc. Material Safety Data Sheets (MSDS) indicating hazardous properties and emergency procedures in case of incident on file and readily available. Substances stored safely. Expiry dates meticulously checked where applicable.

19. THE PRINCIPAL CONTRACTOR'S GENERAL DUTIES

The Principal Contractor shall at all times ensure his status of an "employer" as referred to in the Act, and will abide by his/her responsibilities, duties and functions as per the requirements of the Act and Regulations with specific reference to Section 8 of the Act.

The Principal Contractor shall keep, and on demand make available, a copy of the Act on site at all times and in addition to that he/she will introduce and maintain a file titled "Health and Safety File", or other record in permanent form, which shall contain all relevant aspects and information as contemplated in the Construction Regulations. He/she will make this file available to the client or his representative whenever necessary or on request to an interested party.

20. THE PRINCIPAL CONTRACTOR'S SPECIFIC DUTIES

The Principal Contractor's specific duties in terms of these specifications are detailed in the Construction Regulations as published under government notice No. 84 dated 7 February 2014.

The Principal Contractor is specifically referred to the following elements of the Construction Regulations:

Regulation No. 1 - Definitions
Regulation No. 2 - Scope of application
Regulation No. 3 - Application for construction work permit
Regulation No. 4 - Notification of construction work
Regulation No. 5 - Duties of client
Regulation No. 6 - Duties of designer
Regulation No. 7 - Principal Contractor and Contractor
Regulation No. 8 - Management and supervision of construction work
Regulation No. 9 - Risk Assessment for construction work
Regulation No. 10 - Fall protection
Regulation No. 11 - Structures
Regulation No. 12 - Temporary works
Regulation No. 13 - Excavation

Regulation No. 14 - Demolition work
Regulation No. 15 - Tunneling
Regulation No. 16 - Scaffolding
Regulation No. 17 - Suspended platforms
Regulation No. 18 - Rope access work
Regulation No. 19 - Material hoists
Regulation No. 21 - Explosive actuated fastening device
Regulation No. 22 - Cranes
Regulation No. 23 - Construction vehicles and mobile plant
Regulation No. 24 - Electrical installations and machinery on construction sites Regulation No. 25 - Use and temporary storage of flammable liquids on construction sites
Regulation No. 26 - Water environments
Regulation No. 27 - Housekeeping and general safeguarding on construction sites
Regulation No. 28 - Stacking & Storage on construction sites
Regulation No. 29 - Fire precautions on construction sites
Regulation No. 32 - Approved Inspection authorities
Regulation No. 33 - Offences and penalties

The Principal Contractor shall ensure compliance to the Act and its Regulations and specifically to the above regulations, and document each record in the Health and Safety File.

21. THE PRINCIPAL CONTRACTOR'S SPECIFIC RESPONSIBILITIES WITH REGARDS TO HAZARDOUS ACTIVITIES

The following activities are identifiable as hazardous in terms of the Construction Regulations.

The contractor shall execute the activities in accordance with the following Construction Regulations and other applicable regulations of the Act:

Regulation No. 10 - Fall protection
Regulation No. 11 - Structures
Regulation No. 13 - Excavation work
Regulation No. 14 - Demolition work
Regulation No. 15 - Tunneling
Regulation No. 16 - Scaffolding
Regulation No. 17 - Suspended platforms
Regulation No. 18 - Rope access work
Regulation No. 19 - Material hoists Regulation
No. 20 - Bulk mixing plant
Regulation No. 21 - Explosive actuated fastening device
Regulation No. 22 - Cranes
Regulation No. 23 - Construction vehicles and mobile plant.
Regulation No. 24 - Electrical installations and machinery on construction sites Regulation No. 25 - Use and temporary storage of flammable liquids on construction sites Regulation No. 26 - Water environments
Regulation No. 27 - Housekeeping on construction sites Regulation No. 29 - Fire precautions on construction sites.

All of the above requirements will be read in conjunction with the relevant regulations and health and safety standards as required by the Act. All documents and records required by the Construction Regulations will be kept in the Health and Safety File and will be made available at any time when required by the client or his representative, or on request to an interested party.

22. GENERAL NOTES TO THE PRINCIPAL CONTRACTOR Legal Framework and obligations

The more important Acts and relevant subordinate/secondary legislation as well as other (inter alia Local Government) legislation that also apply to the project as well as to project owned buildings and premises: -

(i) The latest issue of SABS 0142: "Code of Practice for the Wiring of Premises";

(ii) The Local Government Ordinance 1939 (Ordinance 17 of 1939) as amended and the municipal by-laws and any special requirements of the local supply authority;

(iii) The Fire Brigade Services Act 1987, Act 99 of 1987 as amended;

(iv) National Building Regulations made under the National Building Regulations and Building Standards Act, 1977 (Act No. 103 of 1977), and promulgated by Government Notice No. R. 2378 of 30 July 1990, as amended by Government Notices No's R. 432 of 8 March 1991, R. 919 of 30 July 1999 and R. 547 of 30 May 2008; (SANS 100400);

(v) The Post Office Act 1958 (Act 44 of 1958) as amended;

(vi) The Electricity Act 1984, Act 41 of 1984;

(vii) The Regulations of Local Gas Board(s), including Publications of the SABS Standards and Codes of Practice, with specific reference to GNR 17468 dated 4th October 1997;

(viii) Legislation pertaining to water usage and the environment;

(ix) Legislation governing the use of equipment, which may emit radiation (e.g. X-Rays etc.)

(x) Common Law

Legal Liabilities

Common Law and Legislation

Based on two main criteria –

Would the reasonable person have foreseen the hazard?

That is a reasonable person in that specific position, taking experience, qualifications, authority, position in the organization etc. into consideration

Would the reasonable person have taken precautionary measures (action) to prevent or limit the hazard?

Negligence can be proven on failure on **any** or **both** of the above criteria (There may not necessarily be a relationship between criminal and civil liability!)

23. HOUSE KEEPING

Good housekeeping will be maintained at all times as per Construction Regulation No. 27. Poor housekeeping contributes to three major problems, namely, costly or increased

accidents, fire or fire hazards and reduction in production. Good housekeeping will enhance production time.

Particular emphasis is to be placed on the following crucial elements of a construction site: Phase priorities and production/plant layout; Enclosures; Pits, openings and shoring; Storage facilities; Effective, sufficient and maintained lighting or illumination;

Principal sources of injuries e.g. stairways, runways, ramps, loose building material; Oil, grease, water, waste, rubble, glass, storm water; Color coding; Demarcations; Pollution; Waste disposal;

Ablution and hygiene facilities; and First aid.

This list must not be taken to be exclusive or exhaustive!

In promotion of environmental control all waste, rubble, scrap etc, will be disposed of at a registered dump site and records will be maintained. Where it is found to be impractical to use a registered dump site or it is not available, the Principal Contractor will ensure that the matter is brought to record with the client or his representative, after which suitable, acceptable alternatives will be sought and applied.

Dross and refuse from metals, and waste matters or by-products whose nature is such that they are poisonous or capable of fermentation, putrefaction or constituting a nuisance shall be treated or disposed of by methods approved of by an inspector.

NOTE: No employer (Principal Contractor) shall require or permit any person to work at night or after hours unless there is adequate, suitable artificial lighting including support services in respect of Health and Safety.

24. LOCKOUT SYSTEMS - ELECTRICAL

A system of control shall be established in order that no unauthorized person can energize a circuit, open a valve, or activate a machine on which people are working or doing maintenance, even if equipment, plant or machinery is out of commission for any period, thus eliminating injuries and damage to people and equipment as far as is reasonably practicable. Physical/mechanical lock-out systems shall be part of the safety system and included in training. Lockouts shall be tagged and the system tested before commencing with any work or repairs.

25. INCIDENT INVESTIGATION

Inspection and reporting is the best way in which a responsible contractor can control his area of responsibility. All incidents therefore, irrespective of whether it gave rise to loss, injury, damage or not, shall be investigated and the results recorded in the Health and Safety File.

26. GENERAL

The project under control of the Principal Contractor shall be subject to periodic health and safety audits that will be conducted by the client at intervals agreed upon between the Principal Contractor and the client, provided such intervals will not exceed periods of one month. The Principal Contractor is to ensure that he/she and all persons under his control on the construction site shall adhere to the above specifications, as non-conformance will lead to the client taking action as directed by Construction Regulation 5.1(q). The Principal Contractor should note that he/she shall be held liable for any anomalies including costs and resulting deficiencies due to delays caused by non-conformance and/or non-compliance to the above Health and Safety Specifications and the Health and Safety Plan based on these specifications.

27. IMPORTANT LISTS AND RECORDS TO BE KEPT

The following are lists of several records that are to be kept in terms of the Construction Regulations. The lists are:

a. List of appointments;
b. List of record keeping responsibilities; and
c. Inspection checklist.

These lists and documents are to be used as a point of reference to determine which components of the Act would be applicable to a particular site or task or project, as was intended under paragraph 1 (“Preamble”) above.

Contractor Risk Assessment Process

The risk assessment process shall include:

1) an evaluation of the method of the work to be conducted
2) the method statement on the procedure to be followed in performing the task shall be developed
3) the risk assessment will also include activities like:
   i. Transportation of passengers and goods to and from site
   ii. Site establishment
   iii. Physical and mental capabilities of employees
   iv. Others as may be specified.
4) the hazards as listed in the paragraph – Site Specific Health and Safety Hazards
5) a review plan for risk assessments shall provide for:
   i. the quarterly review of all applicable risk assessments
   ii. the review of an assessment if there is reason to believe that the previous assessment is no longer valid, or there has been a change in a process, work methods, equipment or procedures and working conditions
   iii. Risk assessment/s to be reviewed if the outcome of incident investigations and audits etc. requires such action.

A pre - task risk assessment shall be conducted in writing on every task and be facilitated by the team leader. All risk assessments and pre-task risk assessments shall be filed and be available on site.

Risk Profile

All contractors shall submit a risk profile of the work to be conducted with their Health and Safety Plan.

Risk Based Inspection Program

The inspection programme shall be risk based. The inspection plan shall form part of the Health and Safety Plan.

27.1. LIST OF APPOINTMENTS

See clause 5.1 of appointments needed

27.2. LIST OF RECORD KEEPING RESPONSIBILITIES

ITEM	CR	RECORD TO BE KEPT	RESPONSIBLE PERSON
1	3(2)	Application for construction work permit to Provincial Director – Annexure 1, where applicable available on site	Client
2	4(1)	Notification to the Provincial Director – Annexure 2, where applicable available on site	Principal Contractor & Contractor
3	5(1)(m)	Copy of Principal Contractor's Health & Safety Plan available on request	Client
4	7(d)	Copy of Principal Contractor's Health & Safety Plan as well as each Contractor's Health & Safety Plan available on request	Principal Contractor
5	7(b)	Health and Safety File opened and kept on site (including all documentation required i.t.o. OHSA & Regulations available on request	All Contractor
6	7(e)	Consolidated Health and Safety File handed to Client on completion of Construction work. To include all documentation required i.t.o. OHSA & Regulations and records of all drawings, designs, materials used and similar information on the structure	Principal Contractor
7	7(f)	Comprehensive and Updated List of all Contractors on site, the agreements between the parties and the work being done Included in Health and Safety file and available on request	Principal Contractor
8	8(6)	Keep record on the Health and Safety Officers registration with a statutory body approved by the Chief Inspector.	Contractor
9	9(1)	Risk Assessment - Available on site for inspection	Contractor

10	7 (5)	Proof of Health and Safety Induction Training	Every Employee on site
11	10(3)	Construction Manager [CR 8(1)] has latest updated version of Fall Protection Plan [CR 10(1)]	Contractor
12	11(2)(b)	Record of inspections of the structure [First 2 years – once every 6 months, thereafter yearly] - Available on request	Owner of Structure
13	11(2)(c)	Maintenance records - safety of structure - Available on request	Owner of Structure
14	13(2)(h)	Record of excavation inspection - On site available on request	Contractor
15	17(11)	Suspended Platform inspection and performance test records kept on site available, on request	Contractor
16	19(8)(c)	Material Hoist daily inspection entered and signed in record book kept on the premises	Contractor
18	19(8)(d)	Maintenance records for Material Hoist - Available on site	Contractor
19	20(8)	Records of Batch Plant maintenance and repairs on site available for inspection	Contractor
20	21(2)(g)(ii)	Issuing and collection of cartridges and nails or studs (Explosive Powered Tools) recorded in register – recipient signed for receipt as well as return	Contractor
21	23(1)(k)	Findings of daily inspections (prior to use) of Construction Vehicles and Mobile Plant	Contractor
22	24(d)	Record of temporary electrical installation inspections [once a week] and electrical machinery [daily before use] in a register and kept on site	Contractor
23	29(l)	Fire Evacuation Plan	Contractor

27.3. INSPECTION CHECKLIST

EMPLOYER DETAILS	
Employer	
Trade Name of Enterprise	
Company Registration No.	
SARS Registration No.	
UIF Registration No.	
COIDA Registration No.	
Relevant SETA for EEA purposes:	
Industry Sector:	
Bargaining Council:	
Contact Person:	
Address of Premises:	
Postal Address:	
Telephone Number:	
Fax Number:	
E-mail Address:	
Chief Executive Officer:	
Chief Executive Officer Address:	
Competent Person:	
Maximum power demand: in KW	

Health and Safety Representatives:	
Activities, products manufactured and/ services rendered:	
Raw materials, materials and chemical/ biological substances:	
Total Number of Employees:	Male:
	Female:

CONTRACTOR INFORMATION	
Contractors:	
Site Address:	
Contracts Manager:	
Managing Director:	
Competent Persons:	
CR16: SCAFFOLDING:	
CR17: SUSPENDED SCAFFOLDING:	
CR19(6): MATERIAL HOIST (S):	
CR20(1): BULK MIXING PLANT:	
CR10(1)(a): FALL PROTECTION:	
CR13(1)(a): EXCAVATION WORK:	
CR14: DEMOLITION WORK:	
CR21(2)(b): EXPLOSIVE ACTUATED FASTENING DEVICES:	
CR28(a): STACKING	

INSPECTION SHEET				
SECTION/REGS	**ITEM CHECKED**	N/A	YES	NO
APPOINTMENTS				
5(1)(h)	Principal contractor for each phase or project			
6	Designer			
7(1)(c)(v)	Contractor			
7(2)(c)	Sub-Contractor			
8(1)	Construction Manager			
8(2)	Assistant Construction Manager			
8(6)	Construction Safety Officer			
8(7)	Construction Supervisor			
8(8)	Assistant Construction Supervisor			
9(1)	Person to carry out risk assessment			
9(4)	Trainer/Instructor			
10(1)(a)	Fall protection officer			
11(2)	Competent structure inspector			
6(2) & 12(1)	Temporary Works Designer			
12(2)	Temporary Works Supervisor			
13(1)(a)	Excavation supervisor			
13(2)(b)(ii)(bb)	Professional engineer or technologist			
13(2)(k)	Explosives expert			
14(1)	Supervisor demolition work			
14(2) + (3)	Demolition expert			
14(11)	Explosives expert			
16(1)	Scaffold supervisor			
17(1)	Suspended platform supervisor			
17(2)(c)	Compliance plan developer			
17(8)(c)	Suspended platform expert			
17(13)	Outrigger expert			
19(8)(a)	Material hoist inspector			
18(1)(a)	Rope access supervisor			
20(1)	Bulk mixing plant supervisor			

20(2)	Bulk mixing plant operator			
21(2)(b)	Explosive actuated fastening device expert			
21(2) (g) (i)	Explosive actuated fastening device controller			
22(a)	Tower crane supervisor			
22(e)	Tower crane operator			
23(1)(d)(i)	Construction vehicle and mobile plant operator			
23(1)(k)	Construction vehicle and mobile plant inspector			
24(d)	Temporary electrical installations inspector			
24 (e)	Temporary electrical installations controller			
28 (a)	Stacking and storage supervisor			
29 (h)	Fire equipment inspector			
DOCUMENTS				
GAR 9(1)	Records of Incidents			
GAR 4	Copy of the Act			
GAR 7	Safety Reps Report			
GAR 8	Safety Committee Minutes			
DMR 18(7)	Lifting Machinery Log (Crane)			
CR 3(3)	Application for construction work permit			
CR 4	Notification of Construction Work			
CR 9(2)	Risk Assessment			
CR 9(9)(e)	Proof of the Health & Safety Induction Training			
CR 13(13)(h)	Inspection of Excavation (Records)			
CR 22(g)	Crane Operator Medical Certificate			
CR 23(11)	Mobile Plant Operator Medical Certificate			
CR 20(9)	Batch Plant Repairs & Maintenance Records			
CR24(d)	Temporary Electrical Installation Record			
CR 7(1)(b)	Health & Safety File			
CR 17(11)	Suspended Platforms' Performance Records			
CR 19(b)& (c)	Material Hoists Record Book			
	Scaffolding Log Book			
CR 7(8)	Medical Certificate of Fitness			
CR 23(1)(l)	Construction Vehicle & Mobile Plant Register			
CR 24(d)	Electrical Installation & Machinery Register			
INCIDENTS				
GAR 8(1) S24	Reported			
GAR 9(1)	Recorded, Investigated and action taken			
PUBLIC SITE				
FR 2(1)	Sanitary Facilities			
CR 30(1) (c)	Changing Facilities for each sex			
NB Notice	Pedestrian warning			
PERSONAL SAFETY EQUIPMENT				
GSR 2(3)	Items Issued:			
GSR 2(3)	Items Required:			
S23	(What is the payment on each item?)			
SAFETY PLANS				
FIRST AID				
GSR 3(6)	Name(s) of First Aider(s):			
CR 5(1)(b)	Client's Health & Safety Specification			
CR7(1)(b)	Principal's contractor H&S Plan			
FIRE HAZARD & PRECAUTIONS				
GSR 4	Flammables used, waste, hot work, diesel, fuel, gas			
ER 9(1)	Portable Extinguishers			
ELECTRICAL INSTALLATIONS & MACHINERY				
CR24	Guarding & PPE to Electrical Installations			
ILLUMINATION				
ER 3(6)	Dangerous Places and signage as well			
ER 3	Housekeeping			

ER6(2)(b),(c),(d)	Clear space storage			
ER6(3)	Disposal of waste			
EXCAVATIONS				
CR 13(3)(l)	Barricades (plus illumination!)			
CR 13(3)(c)	Safe Depth Shoring/Bracing			
CR 13(1)(a)	Monitored			
CR 13(3)(h)	Excavation Inspection Record			
GUARDING				
ER 6(2)(f)	Floor Openings (plus illumination!)			
	Floor slab sides, Shafts (plus illumination!)			
SITE EQUIPMENT				
GSR 13A(a)	Ladders condition, secured			
SANS 10085	Scaffold condition, secured			
SANS 10085	Platforms no. of boards condition Support 1.25. Toe Boards			
SANS 10085	Hand Rails			
SITE MACHINES				
DMR 3(2)(3)	Circulars, guards, riving knives			
GMR 3	Mixers guarded			
ELECTRIC POWER				
EMR 6(1)	Switchboards			
GMR	Condition of Tools, Leads, Plugs, etc			
LIFTING MACHINE/TACKLE				
DMR 18(8)	Lifting of persons			
DMR 18(8)	Condition, Securing of Load			
EXPLOSIVE ACTUATED FASTENING DEVICE				
CR 21(1)	Fastening Device			
IMPROV	Warning Notice			
ROOF WORK				
CR 10(1)	Safety equipment & precautions			
CR 10(2)	Fall protection plan			
CR 10(3)	Updated fall protection plan			
CR 10(5)	Roof Work			
CEMENT				
AR 10(a)	Suitable Tools			

28. MEASUREMENT AND PAYMENT

The payment items for Occupational Health & Safety are contained in the Bill of Quantities. The same rules are applicable in respect of the pricing of these items as for every other payment item. Attention is drawn to the Pricing Instructions in this document.

29. NON-CONFORMANCES

Should, at any time, the works, or part of the works, be stopped due to unsafe acts or non-compliance with the Clients or PCs H&S Plan; neither the PC nor any other Contractor shall have a claim for extension of time or any other compensation.

Minor: **Penalty: R50/count**	**Medium:** **Penalty: R500/count and a non-conformance**	**Severe** **Penalty: R5000/count, a non-conformance and/or activity stoppage**
Non-use of PPE supplied	Toilets not supplied or regularly serviced; lack of drinking water	Contractors working without Health and Safety Plan approval
Non completion of registers for plant and equipment on site	Contractors not audited	Workers transported in contravention of the OHS plan or legal requirements
Lack of H&S signage at work areas	Working without training or the appropriate, approved H&S method statements	Invalid Letters of Good Standing
Tools and equipment identified in poor condition during inspections	Legal non-conformances identified during the previous audit and not addressed within the agreed time frame	Non-compliance with traffic accommodation requirements: layout or physical conditions
	No monthly OHS report at site meeting to report on	Any serious breach of legal requirements
	No certificates of fitness for workers as required	
	Working without approved method statements	

30. FAILURE TO COMPLY WITH PROVISIONS

Failure or refusal on the part of the PC or their Contractors to take the necessary steps to ensure the safety of workers and the general public in accordance with these specifications or as required by statutory authorities or ordered by the engineer, shall be sufficient cause for the engineer to apply penalties as follows:

(i) A penalty as shown in the Table above shall be deducted for each and every occurrence of non-compliance with any of the requirements of the H&S Specification.

(ii) In addition a time-related penalty of R500,00 per hour over and above the fixed penalty may be deducted for non-compliance to rectify any non-conformance within the allowable time after a site instruction to this effect has been given by the Client's representative. The site instruction shall state the agreed time, which shall be the time in hours for reinstatement of the defects. Should the Contractor fail to adhere to this instruction, the time-related penalty shall be applied from the time the instruction was given.

The payment items for Occupational Health & Safety are contained in the Bill of Quantities. The same rules are applicable in respect of the pricing of these items as for every other payment item. Attention is drawn to the Pricing Instructions in this document.

31. INSPECTIONS, FORMAL ENQUIRES AND INCIDENTS

1. The contractor shall inform the relevant safety representative:

i. beforehand of inspections, investigations or formal inquiries of which he has been notified by an inspector; and

ii. as soon as reasonably practicable of the occurrence of an incident on the site.

2. The contractor shall record all incidents and notify the employer's health and safety agent of any incident, except in the case of a traffic accident on a public road, as soon as possible after it has occurred and report such incidence to an inspector of the department of labour and notify the Provincial Director of the Department of Labour of such incident within 7 days on the prescribed form.

3. The contractor shall investigate all incidents and issue the employer's health and safety agent with copies of such investigations.

4. The contractor shall in the event of an incident in which a person dies, or is injured to such an extent that he is likely to die, or suffered the loss of a limb or part of a limb:

i. notify the Provincial Director of the Department of Labour of such incident by telephone, facsimile or similar means of communication;

ii. ensure that no person disturbs the site at which the incident occurred or remove any article or substance involved in the incident therefrom, without the consent of an inspector, unless an action is necessary to prevent a further incident, to remove the injured or dead, or to rescue persons from danger;

iii. and provide the Provincial Director of the Department of Labour with a report which includes the measures that the contractor or his subcontractor intend to implement to ensure a safe site as reasonably practicable.

5. The contractor shall notify the Provincial Director of the Department of Labour of the death of any person which results from injuries sustained in an incident.

32. EMERGENCY PROCEDURES

The contractor shall submit for acceptance to the employer's health and safety agent an emergency procedure which include but are not limited to fire, spills, accidents to employees, exposure to hazardous substances, which:

- identifies the key personnel who are to be notified of any emergency;
- sets out details including contact particulars of available emergency services; and

- the actions or steps which are to be taken during an emergency.

The contractor shall within 24 hours of an emergency taking place notify the employer's health and safety agent in writing of the emergency and briefly outline what happened and how it was dealt with.

IMPORTANT CONTACT DETIALS

(FOR HEALTH & SAFETY ASPECTS ONLY)

The contractor is to add all the important contact information about essentials services, support and assistance.

	SERVICE	NUMBER	CONTACT PERSON
	Hospital		
	Ambulance		
	Water		
	Electricity		
	Police		
	Fire Brigade		
	Engineer		

ADD OTHER IMPORTANT HEALTH & SAFETY CONTACT DETAILS AS MAY BE FOUND NECESSARY.

C3.5 HIV & AIDS Specification

Project title:	**EXPLORATION AND INSTALLATION OF BOREHOLE AND BACKUP TANK FOR WHITTLESEA DEPOT.**
Tender No:	**CHR5-22/23-0015**

HIV & AIDS REQUIREMENTS

1 SCOPE

This specification contains all requirements applicable to the Contractor for creating HIV & AIDS awareness amongst all of the Workers involved in this project for the duration of the construction period, through the following strategies:

- Raising awareness about HIV & AIDS through education and information on the nature of the disease, how it is transmitted, safe sexual behaviour, attitudes towards people affected and people living with HIV & AIDS, how to live a healthy lifestyle with HIV & AIDS, the importance of voluntary testing and counselling, the diagnosis and treatment of Sexually Transmitted Infections and the closest health Service Providers
- Informing Workers of their rights with regard to HIV & AIDS in the workplace
- Providing Workers with access to condoms and other awareness material that will enable them to make informed decisions about sexual practices

2 DEFINITIONS AND ABBREVIATIONS

2.1 Definitions

Service Provider: The natural or juristic person recognised and approved by the Department of Public Works & Infrastructure as a specialist in conducting HIV & AIDS awareness programmes

Service Provider Workshop Plan: A plan outlining the content, process and schedule of the training and education workshops, presented by a Service Provider which has been approved by the Representative/Agent

Worker: Person in the employ of the Contractor or under the direction or supervision of the Contractor or any of his Sub-contractors, who is on site for a minimum period of 30 days in all

2.2 Abbreviations

HIV	:	Human Immunodeficiency Virus
AIDS	:	Acquired Immune Deficiency Syndrome
STI	:	Sexually Transmitted Infection

3 BASIC METHOD REQUIREMENT

The Contractor shall, through a Service Provider, conduct onsite workshops with the Workers

The Service Provider shall develop and compile a Service Provider Workshop Plan to be presented at the workshops and which will be best suited for this project to achieve the specified objectives with regard to HIV & AIDS awareness.

The Service Provider Workshop Plan shall be based on the following information provided by the Contractor:

- Number of Workers and Sub-contractors on site
- When new Workers or Sub-contractors will join the construction project
- Duration of Workers and Sub-contractors on site

- How the maximum number of Workers can be targeted with workshops
- How the Contractor prefers workshops to be scheduled, *e.g.* three hourly sessions per Worker, or one 2.5 hour workshop per Worker
- Profile of Workers, including educational level, age and gender (if available)
- Preferred time of day or month to conduct workshops
- A Gantt chart reflecting the construction programme, for scheduling of workshops
- Suitable venues for workshops

The Contractor shall submit the Service Provider Workshop Plan for approval within 21 days after the tender acceptance date. After approval by the Representative/Agent, the Contractor shall make available a suitable venue that will be conducive to education and training

The Service Provider Workshop Plan shall address, but will not be limited to the following:

3.1 The nature of the disease;

3.2 How it is transmitted;

3.3 Safe sexual behaviour;

3.4 Post exposure services such as voluntary counselling and testing (VCT) and nutritional plans for people living with HIV & AIDS;

3.5 Attitudes towards other people with HIV & AIDS;

3.6 Rights of the Worker in the workplace;

3.7 How the Awareness Champion will be equipped prior to commencement of the HIV & AIDS awareness programme with basic HIV & AIDS information and the necessary skills to handle questions regarding the HIV & AIDS awareness programme on site sensitively and confidentially;

3.8 How the Service Provider will support the Awareness Champion;

3.9 Location and contact numbers of the closest clinics, VCT facilities, counselling services and referral systems;

3.10 How the workshops will be presented, including frequency and duration;

3.11 How the workshops will fit in with the construction programme;

3.12 How the Service Provider will assess the knowledge and attitude levels of attendees to structure workshops accordingly;

3.13 How the video will be used;

3.14 How the Service Provider will elicit maximum participation from the Workers;

3.15 A questions and answers slot (interactive session)

The Service Provider Workshop Plan shall encompass the Specific Learning Outcomes (SLO) as stipulated

4 HIV/& AIDS AWARENESS EDUCATION AND TRAINING

4.1 Workshops

The Contractor shall ensure that all Workers attend the workshops

The workshops shall adequately deal with all the aspects contained in the Service Provider Workshop Plan. A video of HIV & AIDS in the construction industry, which can be obtained from all Regional Offices of the Department of Public Works & Infrastructure, is to be screened to Workers at workshops. In order to enhance the learning experience, groups of not exceeding 25 people shall attend the interactive sessions of the workshops

4.2 Recommended practice

4.2.1 Workshop Schedule

Presenting information contained in the Service Provider Workshop Plan can be divided in as many workshop sessions as deemed practicable by the Contractor, provided that all Workers are exposed to all aspects of the workshops as outlined in the Service Provider Workshop Plan

Breaking down the content of information to be presented to Workers into more than one workshop session however, has the added advantage that messages are reinforced over time while providing opportunity between workshop sessions for Workers to reflect and test information. Workers will also have an opportunity to ask questions at a following session

4.2.2 Service Providers

A database of recommended Service Providers is available from all Regional Offices of the Department of Public Works & Infrastructure

4.2.3 HIV & AIDS Specific Learning Outcomes and Assessment Criteria

Workers shall be exposed to workshops for a minimum duration of two-and-a-half hours. In order to set a minimum standard requirement, the following specific learning outcomes and assessment criteria shall be met

4.2.3.1 UNIT 1: The nature of HIV & AIDS

After studying and understanding this unit, the Worker will be able to differentiate between HIV and AIDS and comprehend whether or not it is curable. The Worker will also be able to explain how the HI virus operates once a person is infected and identify the symptoms associated with the progression of HIV & AIDS

Assessment Criteria:

1. Define and describe HIV and AIDS
2. List and describe the progression of HIV & AIDS

4.2.3.2 UNIT 2: Transmission of the HI virus

After studying and understanding this unit, the Worker will be able to identify bodily fluids that carry the HI virus. The Worker will be able to recognise how HIV & AIDS is transmitted and how it is not transmitted

Assessment Criteria:

1. Record in what bodily fluids the HI virus can be found
2. Describe how HIV & AIDS can be transmitted
3. Demonstrate the ability to distinguish between how HIV & AIDS is transmitted and misconceptions around transmittance of HIV & AIDS

4.2.3.3 UNIT 3: HIV & AIDS preventative measures

After studying and understanding this unit, the Worker will comprehend how to act in a way that would minimise the risk of HIV & AIDS infection and to use measures to prevent the HI virus from entering the bloodstream

Assessment Criteria:

1. Report on how to minimise the risk of HIV & AIDS infection
2. Report on precautions that can be taken to prevent HIV & AIDS infection
3. Explain or demonstrate how to use a male and female condom

4. List the factors that could jeopardize the safety of condoms provided against HIV & AIDS transmission

4.2.3.4 UNIT 4: Voluntary HIV & AIDS counselling and testing

After studying and understanding this unit, the Worker will be able to recognise methods of testing for HIV & AIDS infection. The Worker will be able to understand the purpose of voluntary HIV & AIDS testing and pre- and post-test counselling

Assessment Criteria:

1. Describe methods of testing for HIV & AIDS infection
2. Report on why voluntary testing is important
3. Report on why pre- and post-test counselling is important

4.2.3.5 UNIT 5: Living with HIV & AIDS

After studying and understanding this unit, the Worker will be able to recognise the importance of caring for people living with HIV & AIDS and be able to manage HIV & AIDS

Assessment Criteria

1. List and describe ways to manage HIV & AIDS
2. Describe nutritional needs of people living with HIV & AIDS
3. Describe ways to embrace a healthy lifestyle as a person living with HIV & AIDS
4. Explain the need for counselling and support to people living with HIV & AIDS

4.2.3.6 UNIT 6: Treatment options for people with HIV & AIDS

After studying and understanding this unit, the Worker will be familiar with the various treatments available to HIV & AIDS infected or potentially HIV & AIDS infected people

Assessment Criteria

1. Discuss anti-retroviral therapy
2. List methods of treatment to prevent HIV & AIDS transmission from mother-to-child
3. Describe the need for treatment of opportunistic diseases for people living with HIV & AIDS
4. Describe post exposure prophylactics

4.2.3.7 UNIT 7: The rights and responsibilities of Workers in the workplace with regard to HIV & AIDS

After studying and understanding this unit, the Worker will be able to identify the rights and responsibilities of the Worker living with HIV & AIDS in the workplace. The Worker will recognise the importance of accepting colleagues living with HIV & AIDS and treating them in a non-discriminative way

Assessment Criteria:

1. Discuss the rights of a person living with HIV & AIDS in the workplace
2. Discuss the responsibilities of a person living with HIV & AIDS in the workplace
3. Report on why acceptance and non-discrimination of colleagues living with HIV & AIDS is important

4.3 Displaying of plastic laminated posters and distribution of information booklets

The Contractor shall obtain a set of four laminated posters conveying different key messages and information booklets, which are available from all Regional Offices of the Department of Public Works

The above-mentioned posters and information booklets have been prepared to raise awareness and to share information about HIV & AIDS and STI's

Posters or display stands shall be displayed on site as soon as possible, but not later than 14 days after the date of site handover

Posters shall be displayed in areas highly trafficked by Workers, including toilets, rest areas, the site office and compounds

The posters on display must always be intact, clear and readable

Information booklets must be distributed to all Workers as soon as possible, but not later than 14 days after site handover, or as soon as the Worker joins the site

5 PROVIDING WORKERS WITH ACCESS TO CONDOMS

The Contractor shall provide and maintain condom dispensers and make both male and female condoms, complying with the requirements of SABS ISO 4074, available at all times to all Workers at readily accessible points on site, for the duration of the contract. The Contractor may obtain condom dispensers from the Department of Health and condoms may be obtained from the Local Clinic or the Department of Health

At least one male and one female condom dispenser and a sufficient supply of condoms, all to the approval of the Representative/Agent, shall be made available on site within 14 days of site hand over. Contractors should note that arrangements to obtain condoms from the Department of Health Clinics prior to site hand over may be necessary, to ensure that condoms are available within 14 days of site handover

Condoms shall be made available in areas highly trafficked by Workers, including toilets, the site office and compounds

6 ENSURING ACCESS TO HIV & AIDS TESTING AND COUNSELLING FACILITIES AND TREATMENT OF SEXUALLY TRANSMITTED INFECTIONS (STI)

The Contractor shall provide Workers with the names of the closest Service Providers that provide HIV & AIDS testing and counselling and Clinics providing Sexually Transmitted Infection (STI) diagnosis and treatment. Information on these Service Providers and Clinics must be displayed on a poster of a size not smaller than A1 in an area highly trafficked by Workers

7 APPOINTMENT OF AN HIV & AIDS AWARENESS CHAMPION

Within 14 days of site handover the Contractor shall appoint an Awareness Champion from amongst the Workers, who speaks, reads and writes English, who speaks and understands all the local languages spoken by the Workers and who shall be on site during all stages of the construction period. The Contractor shall ensure that the Awareness Champion has been trained by the Service Provider on basic HIV & AIDS information, the support services available and the necessary skills to handle questions regarding the HIV & AIDS programme in a sensitive and confidential manner

The Awareness Champion shall be responsible for:

7.1 Liasing with the Service Provider on organising awareness workshops;

7.2 Filling condom dispensers and monitoring condom distribution;

7.3 Handing out information booklets;

7.4 Placing and maintaining posters

8 MONITORING

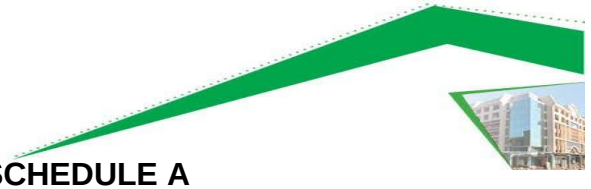
The Contractor shall grant to the Representative/Agent reasonable access to the construction site, in order to establish that the Contractor complies with his obligations regarding HIV & AIDS awareness under this contract

The Contractor must report problems experienced in implementing the HIV & AIDS requirements to the Representative/Agent

The attached SITE CHECKLIST (SCHEDULE A) shall be completed and submitted at every construction progress inspection to the Representative/Agent

The attached SERVICE PROVIDER REPORT (SCHEDULE B) shall be completed and submitted on a monthly basis to the Department's Project Manager, through the Representative/Agent

The attached CONTRACTOR HIV & AIDS PROGRAMME REPORT (SCHEDULE C), a close out programme report, shall be completed by the Contractor at the end of the contract



SCHEDULE A

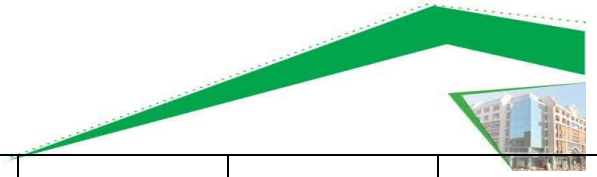
HIV & AIDS PROGRAMME : SITE CHECKLIST

When did construction commence _____

Name of Departmental Project Manager _____

Please refer to HIV & AIDS Programme activities during the reporting period

Tick the block if Contractor satisfactorily complied with specifications																												
DATE	**PI**				**PI**				**PI**				**PI**				**PI**				**PI**				**PI**			
	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M
Programme implemented within 60 days of site handover																												
Awareness champion on site																												
HIV & AIDS awareness service provider report																												
Male condom dispenser																												
Sufficient male condoms available																												
Male condom dispenser in a highly trafficked area																												
Female condom dispenser																												
Sufficient female condoms available																												
Female condom dispenser in a highly trafficked area																												
All four types of posters displayed																												
Posters in a good condition																												
Posters in a highly trafficked area																												
Posters displayed on local support services: clinic & VCT centre																												



Support service poster/s in highly trafficked area							
Support service poster/s in a good condition							
Please indicate the applicable number for the reporting period							
Workers on payroll (at PI)							
Sub-Contractors who will be on site for longer than 30 days (at PI)							
Workshop attendees							
Number of workshops held							
Scheduled workshops according to approved workshop plan							
Booklets distributed							
Male condoms distributed							
Female condoms distributed							
_____ Representative/Agent							
_____ Contractor							

Province of the EASTERN CAPE PUBLIC WORKS

Date of progress inspection (dd/mm/yy)_____

Reporting period: (dd/mm/yy)_____to (dd/mm/yy)_____

Deviations from HIV & AIDS awareness programme plan:

Corrective actions

_____ _____

Representative/Agent Departmental Project Manager

_____ _____

Date Date

SCHEDULE B

HIV & AIDS AWARENESS PROGRAMME: SERVICE PROVIDER REPORT

Reporting period: (dd/mm/yy)_____ to (dd/mm/yy) _____

Number of workshops conducted in reporting period _____

Number of scheduled workshops according to approved workshop plan _____

Deviations from workshop plan:

State reasons for deviating from workshop plan:

Corrective actions:

_____ _____

Service Provider Contractor

_____ _____

Date Date

HIV & AIDS AWARENESS PROGRAMME : WORKSHOP CONTENT ADDRESSED

Fill in the applicable information with regard to each workshop conducted																												
DATE	**W/S**				**W/S**				**W/S**				**W/S**				**W/S**				**W/S**				**W/S**			
	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M
Content of workshop: *(Mark the content included)*																												
SLO1																												
SLO2																												
SLO3																												
SLO4																												
SLO5																												
SLO6																												
SLO7																												
HIV & AIDS in construction video																												
Indicate the duration of the workshop in hours																												
Total number of Workers																												
Indicate workshop venue																												

HIV & AIDS AWARENESS PROGRAMME: ATTENDANCE REGISTER

Fill in your name and indicate attendance by ticking the appropriate date																													
DATE		**W/S**				**W/S**				**W/S**				**W/S**				**W/S**				**W/S**				**W/S**			
		D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M
No	**NAMES**																												

SCHEDULE C

CONTRACTOR HIV & AIDS PROGRAMME REPORT

Project name _____

Project Location _____

Contract value of project (R) _____

Department of Public Works & Infrastructure Project Manager _____

HIV & AIDS Programme duration: (dd/mm/yy)_____ to (dd/mm/yy) _____

AWARENESS MATERIAL

Describe location of posters displayed during the programme _____

_____

Comments on posters _____

_____

_____

Indicate total number of booklets distributed _____

Comments on booklets _____

_____

_____

CONDOMS

Indicate total number of male condoms distributed _____

Indicate total number of female condoms distributed _____

Describe where male condom dispenser was placed _____

Describe where female condom dispenser was placed _____

HIV & AIDS WORKSHOPS

Indicate the total number of HIV & AIDS workshops conducted _____

Indicate the duration of workshops _____

Indicate the total number of Workers that participated in the HIV & AIDS workshops _____

Indicate the total number of Workers that were exposed to the video on HIV & AIDS in the Construction Industry

_____

Comments on HIV & AIDS workshops on site _____

_____

GENERAL

Briefly describe programme activities and satisfaction with outcome _____

_____

_____

Additional comments, suggestions or needs with regard to the HIV & AIDS awareness programmes on site

_____

_____

_____

Please indicate if your company has a formal HIV & AIDS policy focussing on HIV & AIDS awareness raising and care and support of HIV & AIDS Workers	Yes	No	Currently developing one

Please indicate if, to your knowledge, you have lost any workers during the duration of the project to HIV & AIDS related sicknesses. One or more of the following might indicate an HIV & AIDS related death:

Excessive weight loss	Coughing or chest pain	Vomiting
Reactive TB	Pain when swallowing	Meningitis
Hair loss	Persistent fever	Memory loss
Severe tiredness	Diarrhoea	Pneumonia

Number of HIV & AIDS-related deaths _____

_____ _____

Contractor **Date**

_____ _____

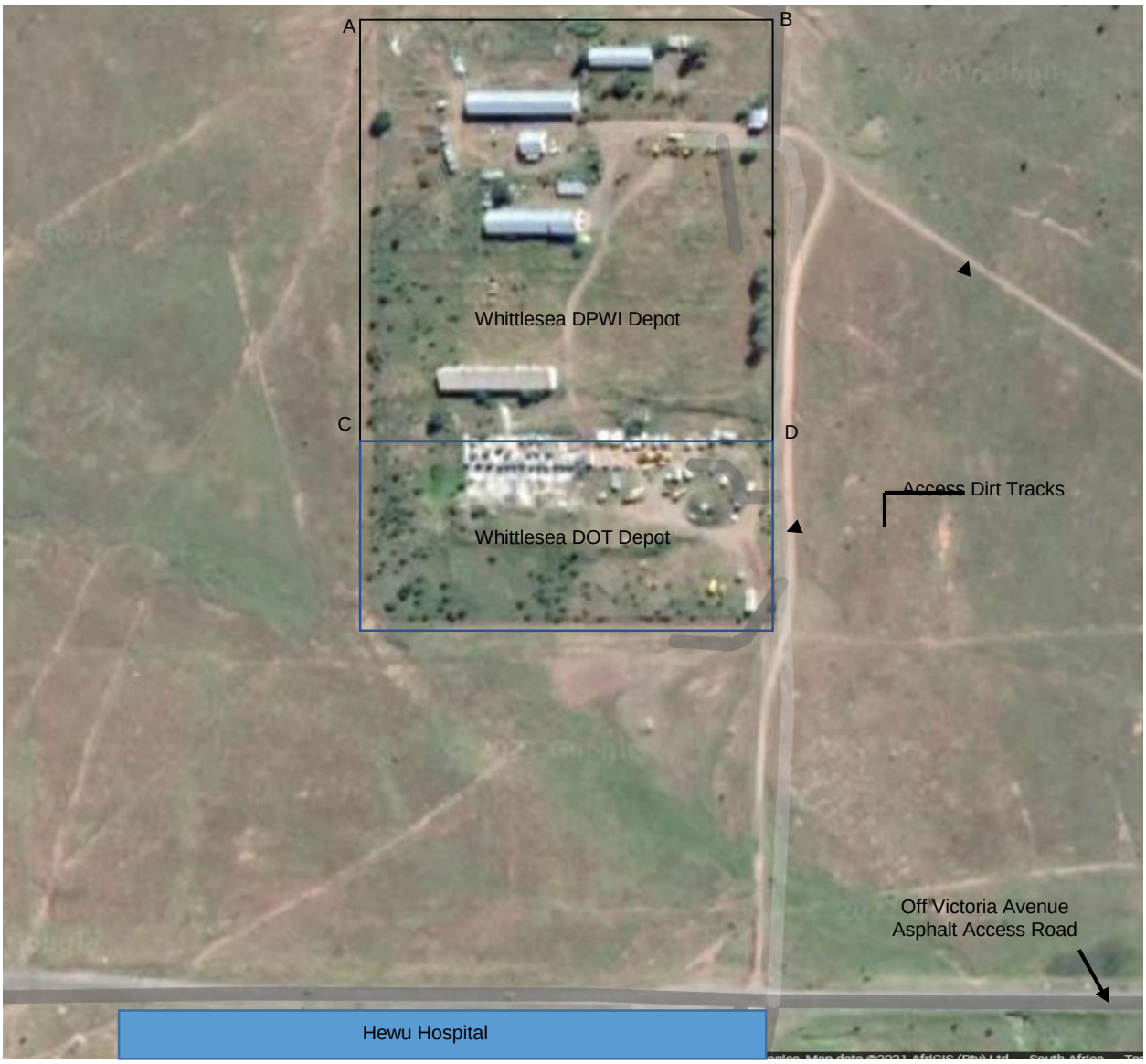
Departmental Project Manager **Date**

PART C4: SITE INFORMATION

C4.1 Site Information

C4.1 Site Information

Project title:	**EXPLORATION AND INSTALLATION OF BOREHOLE AND BACKUP TANK FOR WHITTLESEA DEPOT.**
Tender No:	**CHR5-22/23-0015**



A 32°09’49.8”S 26°47’26.8”E
B 32°09’49.7”S 26°47’34.4”E
C 32°09’56.4”S 26°47’26.8”E D 32°09’56.5”S 26°47’34.5”E

Item	Description
Site information	
C4.1.1	General
C4.1.2	Site Access
C4.1.3	Site Occupied
C4.1.4	Site Rules
C4.1.5	Site Establishment

C4.1.1 GENERAL

The site is Public Works and Infrastructure Depot located in Whittlesea, under the Enoch Mgijima Local Municipality in the Chris Hani region

C4.1.2 SITE ACCESS

Entrance to the sites is as per the formal Access and Control Procedure of the department, the Service Provider and his/her employees must familiarize themselves with these.

C4.1.3 SITES OCCUPIED

The site is currently occupied and functioning. The contractor will be required to advise the relevant Public Works and Infrastructure officials in advance of the dates and times when his activities are to take place and to ensure that the functioning of the offices is not disrupted.

C4.1.4 SITE RULES

Unless otherwise stated all equipment and apparatus shall remain the property of the Client.

The Service Provider shall completely carry out all works per request as specified by the Client, in a careful, skillful, practical and safe manner under the constant supervision of a competent foreman.

Should the Client not be satisfied with the performance of the Supervision on site, the Client holds the rights to stop the works.

C4.1.5 SITE ESTABLISHMENT

No accommodation for any personnel will be allowed on site. No storage facilities
will made available.
Ablution facilities (or access to ablution facilities) will be provided
Service Provider to provide communication and independent network access / connections as per their personnel's requirements.